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INFANTRY DIVISION

HEADQUARTERS, DEPARTMENT OF THE ARMY

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HEADQUARTERS
DEPARTMENT OF THE ARMY
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INFANTRY DIVISION

		Paragraph	Page
CHAPTER 1.	INTRODUCTION		
Section I.	General	1–3	4
II.	Operational environment, roles, and missions of the infantry division.	4–6	5
III.	Organization, capabilities, and limitations of the infantry division.	7–10	7
CHAPTER 2.	COMMAND AND CONTROL		
Section I.	Command	11–14	10
II.	Division staff	15–17	11
III.	Brigade headquarters	18–20	14
IV.	Command posts	21–27	15
V.	Liaison	28, 29	21
VI.	Organization for combat	30, 31	23
VII.	Signal communications	32, 33	23
CHAPTER 3.	TACTICAL UNITS		
Section I.	General	34, 35	25
II.	The battle group	36–41	27
III.	The armor battalion	42–47	28
IV.	The cavalry squadron	48–53	29
V.	Division artillery	54–59	31
CHAPTER 4.	TACTICAL SUPPORT		
Section I.	General	60, 61	34
II.	Fire support	62–67	35
III.	Air defense artillery	68, 69	41
IV.	Intelligence support	70–78	43
V.	Engineer support	79–81	47
VI.	Signal support	82–84	50
VII.	Army aviation support	85–88	58
VIII.	Tactical ground transportation	89–91	61
IX.	Chemical support	92–95	64
X.	Psychological Warfare	96, 97	66

*** This manual supersedes FM 7–100, 3 October 1958.**

		Paragraph	Page
CHAPTER 5.	ADMINISTRATIVE SUPPORT		
Section I.	General	98–102	67
II.	Control of administrative support	103–106	69
III.	Logistical support	107–114	77
IV.	Personnel support	115–121	88
V.	Civil affairs	122–124	92
VI.	Rear area security and area damage control	125, 126	93
CHAPTER 6.	OFFENSE		
Section I.	General	127–131	96
II.	Basic considerations of offense	132–148	98
III.	Planning the attack	149–160	111
IV.	The advance to contact	161–170	119
V.	The penetration	171–174	127
VI.	The envelopment	175–180	132
VII.	Infiltration	181–184	138
VIII.	Exploitation	185–191	143
IX.	Night combat	192–194	149
X.	Reconnaissance in force	195–198	155
CHAPTER 7.	DEFENSE		
Section I.	General	199, 200	158
II.	Fundamentals of defense	201, 202	158
III.	Forms of defense	203–206	162
IV.	Echelons of the defense	207–210	165
V.	Planning the defense	211–222	168
VI.	Offensive maneuver in the defense	223, 224	176
VII.	Conduct of the defense	225, 226	180
CHAPTER 8.	RETROGRADE		
Section I.	General	227, 228	182
II.	Delaying action	229–233	182
III.	Withdrawal	234–238	191
IV.	Retirement	239–242	198
V.	Passage through a rearward position	243–247	200
CHAPTER 9.	RELIEF OPERATIONS		
Section I.	General	248, 249	202
II.	Relief in place	250–253	202
III.	Passage of lines	254–258	207
IV.	Considerations affecting the choice of reliefs prior to attack.	259–261	211
CHAPTER 10.	OTHER TACTICAL OPERATIONS		
Section I.	General	262, 263	213
II.	Unrestricted scale of use of nuclear weapons	264–266	213
III.	Amphibious operations	267, 268	215
IV.	Joint airborne operations	269–273	216

		Paragraph	Page
Section V.	Airmobile operations	274–277	219
VI.	Link-up operations	278, 279	222
VII.	Raids, feints, demonstration, and ruses	280–283	227
VIII.	Combat at river lines	284–286	230
IX.	Combat in fortified areas	287–289	231
X.	Combat in built-up areas	290–292	233
XI.	Combat in extreme terrain and weather conditions.	293–302	234
XII.	Situations short of war	303–306	240
XIII.	Guerrilla warfare	307–313	245
CHAPTER 11.	TROOP MOVEMENTS		
Section I.	Basic considerations	314–320	255
II.	Tactical motor marches	321–342	257
III.	Movements by rail	343–346	267
IV.	Movements by water	347–350	269
V.	Movements by air	351–354	270
VI.	Bivouac and assembly areas	355–357	272
APPENDIX I.	REFERENCES		275
II.	ORGANIZATION CHARTS		278
III.	EXAMPLE STANDING OPERATING PROCEDURE INFANTRY DIVISION.		302
IV.	VEHICLE REQUIREMENTS—INFANTRY DIVISION.		364
V.	AIRCRAFT REQUIREMENT TABLES		367
INDEX			374

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Purpose

This manual sets forth doctrine and guidance for the employment of the infantry division. It is designed primarily for the use of the infantry division commander and staff.

2. Scope

a. This manual provides specific doctrine pertaining to the organization, control, tactical employment, and administrative support of the infantry division.

b. This is a division level manual. Operations applicable to brigade task forces are discussed where appropriate. Details pertaining to other subordinate units are included only to the extent required for an understanding of divisional operations.

c. Infantry division operations that cover all conditions of conflict and scales of use of nuclear weapons are considered. The basic material presented herein is applicable to nuclear warfare. Where appropriate, modifying guidance for nonactive nuclear warfare is also presented.

d. The doctrine presented in this manual is that which is common to all areas of operations. Special operations (northern, jungle, mountains, desert, etc.) are covered in detail in other manuals and are discussed only in general terms in this manual.

e. This manual avoids repetition of material presented in other publications. It should, therefore, be used in conjunction with other applicable manuals and training texts (app. I).

f. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to U.S. Army Command and General Staff College.

3. Organization of the Manual

a. This manual is organized functionally to facilitate use of personnel having specific areas of interest. For example, all material pertaining to tactical support is grouped in chapter 4, and all material pertaining to administrative support is located in chapter 5. While this procedure consolidates interrelated material pertaining to functional areas of interest, it also necessitates some cross referencing. For example, the division signal and engineer battalions are discussed in both chapters because they have both tactical support and administrative support missions.

b. To facilitate easy reference, organizational charts of subordinate units of the division are grouped in appendix II.

Section II. OPERATIONAL ENVIRONMENT, ROLES, AND MISSIONS OF THE INFANTRY DIVISION

4. Operational Environment

a. General.

(1) The diverse conditions and situations likely to be encountered in modern war require that the infantry division be organized, equipped, and trained to operate in a wide variety of operational environments.

(2) Any operational environment in which the infantry division must operate is a composite of several variable elements including the type of conflict, the scale of use of nuclear weapons, the characteristcs of the area of operations, the nature of the enemy, and the friendly force structure. These elements influence the manner in which the division accomplishes its mission and serve to delineate the operational requirements which the infantry division must be capable of accomplishing.

b. Type of Conflict and Scale of Nuclear Weapons Usage.

(1) The infantry division must be prepared to fight in a general war or in a limited war under varying scales of nuclear weapons usage. Also the division must be capable of conducting operations in cold war.

(2) General war is synonymous with the term "general nuclear war" and is defined as an armed conflict between two major powers or coalitions involving use of the total means available, including nuclear strikes against the homeland of either side. The initial phase of a general war is characterized by an unrestricted use of nuclear

and other weapons. During this phase, the infantry division deploys to dispersed, prepared, protected positions to retain maximum combat power. Subsequent phases of a general war may be characterized by a scale of nuclear weapons usage less than unrestricted. The infantry division must be capable of conducting all types of operations under varying degrees of nuclear weapons usage during these subsequent phases.

(3) Limited war is defined as any armed conflict between nations other than general war. Limitations invoked may be restrictive on the means employed or upon the extent of the area of operations. Limited war may occur under either active or nonactive nuclear conditions. The infantry division must be capable of fighting under any condition of limited war.

(4) Cold war is defined as the complete scope of actions other than limited or general war which can be used by either side in a power struggle between major contending nations or coalitions. The ability of the infantry division to apply measured force makes it well suited to operations in specific military contingencies arising from cold war. Such operations may be to deter use of force by another nation, to encourage a week or faltering government, to maintain or restore order, or to protect US or Allied personnel and property.

(5) A detailed discussion of the forms of war is contained in FM 100–5.

c. The Area of Operations. The execution of national policy may require the employment of the infantry division in any area of the world under a wide variety of operational environments.

d. Nature of the Enemy. The infantry division must be prepared to conduct operations against enemy regular military forces, partisan forces, or any combination thereof.

e. Friendly Force Structure. The infantry division may be employed independently or as a part of a larger force.

5. Mission of the Infantry Division

The basic mission of the infantry division is to destroy the enemy by offensive action employing fire, maneuver, and close combat. In executing this fighting mission during either general war or limited war, the division conducts a wide variety of offensive, defensive, and specialized tactical operations.

6. Other Roles

In addition to its basic combat role, the infantry division may be deployed in a cold war to accomplish—

a. A show of force.

b. Truce enforcement.

c. International police action.

d. Legal occupation.

Section III. ORGANIZATION, CAPABILITIES, AND LIMITATIONS OF THE INFANTRY DIVISION

7. Organizational Characteristics

The infantry division is organized as shown in figure 37. It comprises a balanced force of essential arms and services equipped to provide a basic combat structure. The salient features of the infantry division organization are as follows:

a. The pentagonal structure provides maximum flexibility in tailoring task organizations to meet the requirements of a specific mission.

b. The division communications system permits command and control of division operations on battlefields of extended widths and depths.

c. Organic nuclear delivery means provide a decisive element of combat power directly responsive to the division commander. Organic delivery means provide a capability for delivery of chemical and biological agents.

d. Organic self-propelled artillery, armored personnel carriers, and tanks facilitate the formation of task forces having high mobility, shock action, and firepower.

e. Ground and air reconnaissance, surveillance, and target acquisition means enhance the ability of the infantry division to secure timely intelligence and target information.

f. Command and control facilities permit receiving, controlling, and coordinating for extended periods all types of reinforcing units which may be required by the mission assigned the division.

8. Capabilities of the Infantry Division

a. The infantry division is a basic unit of the combined arms and services team. The division is capable of sustaining itself in

combat for extended periods when supported by normal field army logistical installations.

b. Alone, or as a part of a large force, the infantry division can—

(1) Conduct all types of ground operations under varying conditions of weather and terrain, either with or without the use of nuclear weapons.

(2) Conduct limited army airmobile operations.

c. As a part of a joint force the division can conduct—

(1) Air-landed operations.

(2) Amphibious operations.

9. Limitations

Without attachments, the division has the following deficiencies:

a. No air defense artillery.

b. Limited airlift capability.

c. Limited long range tactical ground mobility.

10. Mobility

a. Air.

(1) Except for its medium gun tanks, tank recovery vehicles, and armor launched bridging, the infantry division is air transportable using a combination of heavy and medium transport aircraft.

(2) With organic utility and light transport helicopters, the division can move two rifle platoons in one lift.

b. Ground.

(1) The overall ground mobility of the infantry division is restricted by the limited tactical ground transport organic to the battle groups. Thirty-seven additional 2½-ton trucks are required to fully motorize a battle group, and sixty-seven armored personnel carriers are required to mechanize it.

(2) Elements of the division trains, the division signal battalion, and the aircraft maintenance detachment are less than 100 percent mobile with organic transportation. Twenty-five additional 2½-ton trucks are required to completely motorize units of the division trains. Eight additional 2½-ton trucks are required to completely motorize the division signal battalion. One additional 2½-ton truck is required to completely motorize the aircraft maintenance detachment.

(3) With 75 percent availability of vehicles of the division transportation battalion, 11* additional 2½-ton trucks are required to provide complete mobility to the division.

(4) Vehicle requirement tables are contained in appendix IV.

* 75 percent availability of vehicles is the planning factor used in FM 55–37, *Transportation Battalion, Infantry Division.*

CHAPTER 2
COMMAND AND CONTROL

Section I. COMMAND

11. Division Commander

a. The division commander is responsible for the overall operations of the infantry division. The complexity of division operations prevents the commander from giving personal attention to all the detailed requirements of the command. The commander must, therefore, concentrate on the essential aspects of his mission, and delegate to his staff the authority to supervise those activities which are less critical. To do this, the commander must establish firm policies and delegate the necessary authority for their efficient execution.

b. The ability of the infantry division to react on the nuclear battlefield reflects directly the flexibility of thought and the boldness of action of the commander. The conditions created by a nuclear environment frequently dictate decentralized operations under mission type orders. Under these conditions, the division commander's concept of operation must be complete and thoroughly understood by subordinate commanders. The subordinate must have the freedom of action to exploit rapid changes in the battle situation, yet still operate within the overall concept of the division commander.

12. Assistant Division Commander/Brigade Commander

a. The assistant division commander is also the brigade commander. In this dual role, he assists in the command and control of the division by performing those tasks assigned by the division commander.

b. As assistant division commander, his duties normally consist of advising the commander on policy matters and executing high level supervision over matters of particular interest to the commander.

c. As brigade commander, the assistant division commander utilizes the brigade staff to assist him in the execution of such missions as—

(1) Command of a brigade task force.

(2) Operation of an alternate division command post.

(3) Conduct of long range planning.

d. During tactical operations, the assistant division commander and the division commander normally do not operate from the same location. This procedure precludes loss of both individuals to one major enemy action.

e. The assistant division commander normally functions from the brigade headquarters. There he keeps abreast of the tactical situation in order that he may be prepared to carry out any missions designated by the division commander.

13. Command Channels

The division commander exercises command of the infantry division through clearly established channels of command. Efficient functioning of the division requires that these channels be understood and utilized. However, under extreme conditions, it may be necessary for a commander to issue instructions directly to units several echelons below him. In this event intermediate commanders must be informed at the earliest opportunity of the action taken. The normal channels of command must be reestablished as soon as possible.

14. Succession of Command

In the event that the commander becomes a casualty, seniority as prescribed by Army Regulations will determine who will succeed to command. However, to insure continuity, commanders should designate individuals in order of succession to execute temporary direction of operations until such time as the next senior can properly assume command or a new commander be appointed.

Section II. DIVISION STAFF

15. General

a. The purpose of the infantry division staff is to assist the division commander in the exercise of command. The staff accomplishes this purpose by reducing the number of items requiring command attention. This is accomplished by exercising the authority delegated to the staff by the commander.

b. Staff action must be accomplished rapidly, recommendations submitted promptly, and instructions issued without delay. This requirement for expedited staff action is paramount on the nuclear battlefield. Expedited staff action is accomplished in part by in-

suring that staff responsibility is clearly delineated and by delegating authority to the staff commensurate with their responsibility.

16. Staff Organization

a. The staff of the infantry division is of the general staff type. It consists of a chief of staff, general staff officers, special staff officers, and personnel staff officers. The composition of the staff is shown in figure 1.

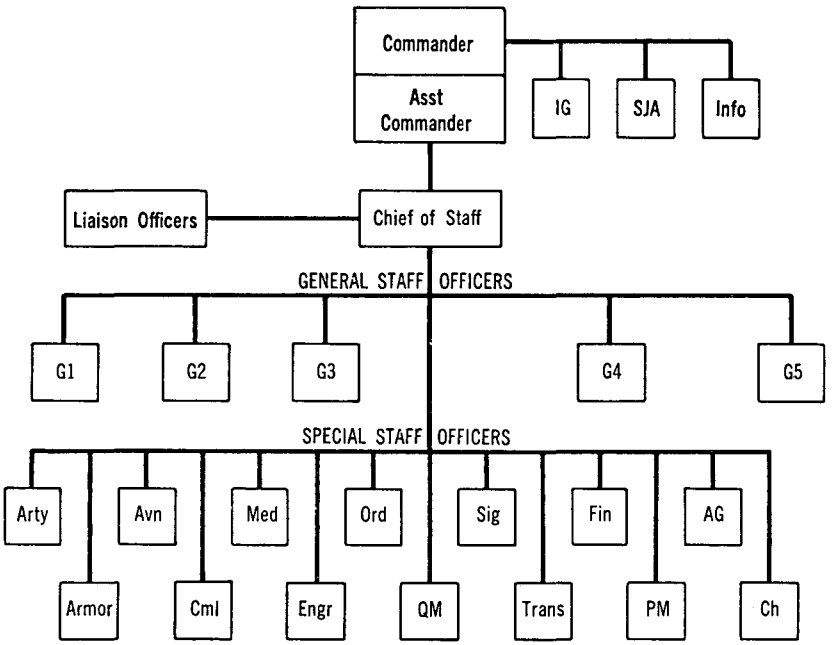


Figure 1. Infantry division staff.

b. Details concerning the functions, procedures, authority, and responsibilities of the various components of the staff are outlined in FM 101–5.

17. Staff Arrangements

a. To expedite staff reaction to the requirements of the tactical situation, various staff working arrangements are established within the infantry division. Among these are—

(1) The G2 section, G3 section, and war room.

(2) The fire support coordination center (FSCC).

(3) The chemical, biological, and radiological center (CBRC).

(4) The division logistics control center (DLCC).

b. The G2 and G3 sections represent the "nerve center" of the division for the control of tactical operations. These two general

staff sections normally operate from the same area within the main command post. To these two sections is directed a continual flow of intelligence, operational information, and requirements. The friendly and enemy situations are continuously displayed and analyzed in order that rapid staff estimates and recommendation can be made. Operating in, or immediately available to, the G3 section are representatives of division engineer, division signal officer, and division aviation officer. On some occasions a transportation and provost marshal representative may operate in the G3 section to assist in planning tactical troop movements. The G2 section has available representatives from attached and supporting intelligence units. Both staff sections are in direct communication with the FSCC, the CBRC, and the DLCC. Tactical requirements are coordinated rapidly among individuals and agencies by the G3. Within the authority delegated by the division commander, the G3 renders decisions and issues instructions. Matters not covered by policy are referred to the chief of staff or division commander for decision along with appropriate staff estimates and recommendations.

c. The war room is a command conference room where displays of the friendly and enemy situations are maintained on a current basis. Staff briefings are conducted in this area. The war room, when operated, is normally located continguous to the G2 and G3 sections, and the situation maps are maintained by personnel of those sections.

d. The division FSCC is composed of the fire support coordinator (division artillery commander), representatives of available fire support agencies, G2 air, G3 air, target analysis and target intelligence personnel, and such other representatives as are required for the efficient coordination of fires within the division. The FSCC operates under the general staff supervision of the G3 and is normally located near the G2 and G3 sections. The FSCC may in some cases be located in the same facility as the G2 and G3 sections. In any case the fire support coordinator or his representative visits the G2 and G3 sections regularly in order to remain abreast of the current situation and to insure the coordination of the actions of the FSCC with the tactical plan. The functions of the FSCC are explained in chapter 4.

e. The division CBRC is headed by the division chemical officer. This center is a central agency for the receipt, processing, evaluation, and dissemination of chemical, biological, and radiological data. The CBRC is located at the main command post near the G2 and G3 sections and the FSCC to facilitate coordination. The functions of this center are further discussed in chapter 4.

f. The DLCC is a division staff facility, under the staff supervision of the G4, from which the logistical support of the division is coordinated. The DLCC is normally located at the division trains command post. The composition and functions of the DLCC are discussed in chapter 5.

Section III. BRIGADE HEADQUARTERS

18. Composition

The brigade commander (assistant division commander) and the brigade staff comprise the brigade headquarters. Personnel and equipment of the brigade headquarters are furnished from the brigade headquarters section of division headquarters. Administrative support and security are provided by division headquarters company.

19. Brigade Staff

The brigade staff is a unit staff having principal staff officers for personnel (S1), intelligence (S2), operations (S3), and logistics (S4). There are no officers specifically designated as brigade special staff officers. As required by the mission assigned, the brigade staff is augmented by representatives of the division special staff officers. Sustained operations may also require augmentation from the division general staff sections. The brigade staff is shown in figure 2.

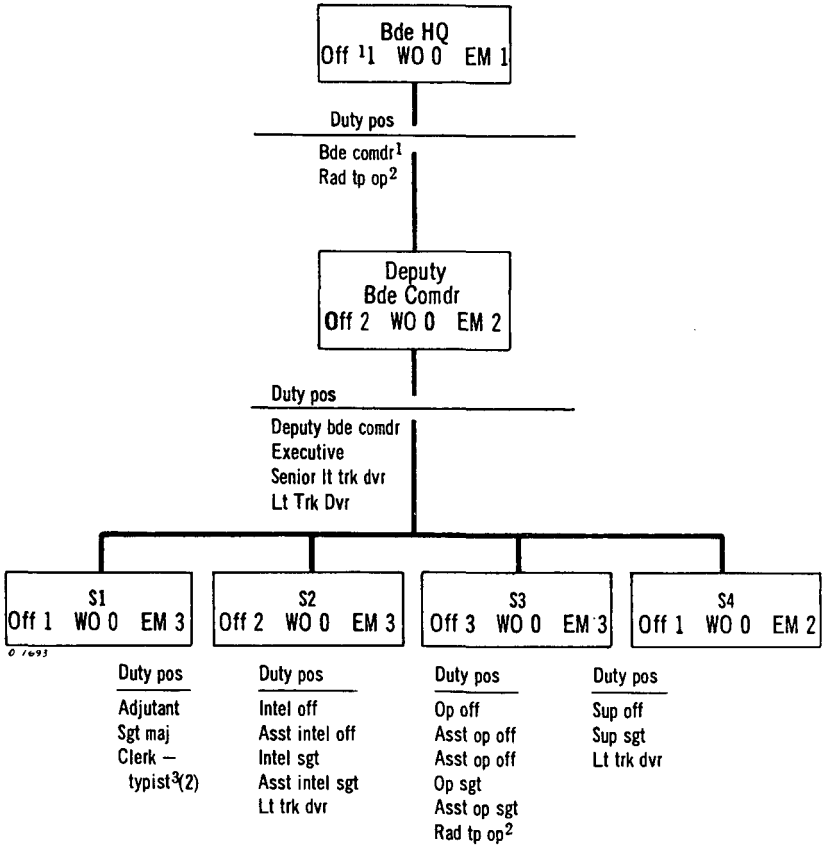
20. Employment

a. The primary purpose of the brigade headquarters is to provide the division commander flexibility in the command and control of the division. Usual employment of the brigade headquarters will be to control and supervise operation of subordinate units which are attached to the brigade for a specific mission. Other employments include use of the brigade headquarters as an alternate division command post or as a planning headquarters.

b. When the brigade headquarters is used to control tactical operations, it may be employed on missions directly controlled by division headquarters or on an independent mission.

c. When the brigade is performing a mission which is directly controlled by the division headquarters, it normally assumes only tactical control over attached units. Administrative support of these units continues to be furnished by division agencies.

d. When the brigade controls independent operations, necessary administrative support elements are normally attached and the



[1]Also asst div comdr (not included in totals of bde HQ).
[2]Also lt trk dvr.
[3]Used anywhere needed.

Figure 2. Brigade staff.

brigade becomes responsible for administrative support as well as tactical control of attached tactical and tactical support units.

e. To control sustained independent or semi-independent operations, the brigade headquarters requires augmentation in personnel, communications, and transportation. The degree of augmentation depends upon the mission of the brigade, terrain, time and space factors, and the capabilities of the signal system.

Section IV. COMMAND POSTS

21. General

a. To facilitate command and control of the division, command and staff elements of the division headquarters and division trains

headquarters are echeloned into a series of headquarters installations. The following echelonment is normally accomplished:

(1) Division main command post.
(2) Division tactical command post (when required).
(3) Brigade command post.
(4) Division trains command post (including those elements of the division staff which operate in the DLCC).
(5) Division rear echelon.

b. Since the manner in which these command posts function determines to a large extent the effectiveness of the division, sound division standing operating procedures must be developed for their organization, operation, location, movement, internal arrangement, and security.

c. The composition of command posts is changed as the situation warrants. Personnel and impedimenta must be kept to the absolute minimum to preserve mobility.

22. Division Main Command Post

a. General. The division main command post is the principal location from which the division commander exercises command.

b. Composition. The following elements are normally located in the area of the division main command post:

(1) Division commander.
(2) Chief of staff section.
(3) Division G2 section.
(4) Attached intelligence detachments.
(5) Division G3 section.
(6) Air Force liaison officer and weather officer.
(7) Fire support coordinator and other personnel operating in the division FSCC.
(8) Division G1, G4, and G5 sections (minus those elements operating in the DLCC).
(9) Aviation section.
(10) Engineer section.
(11) Air defense representatives.
(12) Signal officer section.
(13) Signal message center section and command signal center platoon.
(14) Adjutant general team.
(15) Headquarters commandant section.
(16) Division headquarters company (less those elements supporting the brigade headquarters).

(17) Chemical, biological, and radiological center (CBRC).
(18) Liaison officers from subordinate, adjacent, and higher units.
(19) Division surgeon section.
(20) Division provost marshal section.
(21) Others as required.

c. Location. The general location of the division main command post is selected by the G3 after conferring with the division commander and the signal officer. The specific site for the main command post is selected by the headquarters commandant under the supervision of the G1. The site selected for the division main command post should satisfy the following considerations:

(1) Facilitate command and control of subordinate units.
(2) Provide access to higher, lower, and adjacent headquarters.
(3) Contain sufficient area to accommodate all elements of the command post.
(4) Allow optimum placement of signal communications means.
(5) Provide adequate cover, concealment, and dispersion.
(6) Facilitate defense with means available. Should be located away from probable targets of enemy attack and where it will be least affected by possible enemy penetrations.
(7) Provide sufficient drainage and hardstand.
(8) Require a minimum of road or other construction.

d. Security. Local security of the command post is organized by the headquarters commandant utilizing personnel of the security platoon of division headquarters company and personnel of the division staff sections as necessary. Defense against air attack and detection by enemy observation requires emphasis on employment of passive security measures. Military police provide internal security for the command post. Normally this security will include measures for the protection of general officers, G2–G3 operations, classified signal facilities, classified facilities required in the FSCC, and operation of dismount.

e. Displacement. The division main command post must be moved as often as the situation requires to maintain control and to reduce the probability of detection. However, too frequent displacement should be avoided in the interest of efficient operation. Continuous command post operation during displacement is insured by—

(1) Early coordination with the division signal officer concerning the impending move.

(2) Organizing the operational personnel and equipment of the command post into a minimum of two displacement teams.

(3) Moving one displacement team to the new command post location while the second team remains operational in the old location.

(4) Closing the old command post installation only after the new installation is established and able to control operation. The second displacement team is then moved to the new command post location or to a new location as required.

23. Division Tactical Command Post

a. When the situation requires, the division commander, accompanied by selected staff officers, may locate himself away from the division main command post in order to better control operations. The command and staff groupment is known as the tactical command post. It is small, mobile, and normally operates for only short periods of time as an extension of the division main command post.

b. The composition of the division tactical command post is specified by the division commander. It will normally include the division G2, G3, selected representatives from other staff sections, a communications team, and a security detachment.

c. The requirements for security and complete communications favor location of the tactical command post in the vicinity of one of the area signal centers of the division communications system.

24. Brigade Command Post

a. The brigade command post consists of the brigade headquarters, the brigade headquarters signal operations platoon, elements of the division headquarters company security platoon and mess section, and such other augmentation as is required by the mission of the brigade.

b. The location of the brigade command post is dependent upon the mission assigned to the brigade headquarters. The command post site should satisfy the same general considerations as stated in paragraph 22*c*. The brigade command post and the division main command post should be sufficiently separated to avoid destruction of both by a single nuclear weapon or CBR attack. Because of its

austere organization, the brigade headquarters normally operates in one echelon.

c. Local security for the brigade command post is furnished by operational personnel of the brigade headquarters augmented by elements of the security platoon of the division headquarters company and personnel of the military police detachment. Maximum utilization must be made of the external security afforded by adjacent units.

25. Division Trains Command Post

a. General. The division trains command post is the facility from which tactical control of division trains units is executed. The division logistics control center (DLCC) is located at the division trains command post.

b. Composition. The division trains command post is composed of the following elements:

(1) Headquarters and headquarters detachment, division trains.

(2) Trains area signal operations platoon.

(3) Those elements of the division general staff and those division special staff officers who are concerned with current administrative support operations.

(4) Liaison officers from attached and supporting administrative support units and from other echelons.

c. Location. The division trains command post is located in the division service area in a position selected by the division trains commander. The site of the trains command post should meet those general considerations listed in paragraph 22*c*.

d. Security. Local security of the division trains command post is provided by operational personnel. External security of the command post and of the division trains as a whole is coordinated by the division trains commander.

26. Division Rear Echelon

a. General. It is often necessary for certain elements of the division trains, because of their limited mobility and their requirement for operational continuity, to displace less frequently than the remainder of the division. Consequently these elements, which are generally those rendering personnel support and routine administrative services, may be at extended distances from the division trains command post. To facilitate control, these elements are grouped together and designated as the division rear echelon.

b. Composition. The following units, agencies, and facilities are normally located in the division rear echelon area.

(1) Division administration company (adjutant general, finance, inspector general, staff judge advocate, replacement section).

(2) Division administrative center unit personnel sections of all divisional units and attached units under the technical supervision of the adjutant general.)

(3) Rear echelon signal operations platoon.

(4) Red Cross representative.

(5) Division rest camp.

(6) Division chaplain section.

(7) Division information officer.

c. Location. The division trains commander in coordination with the division G1 designates the location of the division rear echelon. When practicable, the division rear echelon is located in the division service area. The tactical situation may dictate that the division rear echelon be located behind the division rear boundary. In this case close coordination must be accomplished with higher headquarters concerning allocation of area, use of communication facilities, and security.

d. Authority. The division trains commander has tactical control of the division rear echelon. To facilitate control, particularly when the division rear echelon is outside of the division area, or when it is at extended distances from the division trains command post, an officer in charge of the rear echelon is appointed. The division commander designates the officer in charge. The adjutant general is normally given this responsibility.

27. Alternate Command Posts

a. General.

(1) The nature of modern battle is such that command post installations are much more vulnerable to disruption by enemy action than ever before. For this reason, all major headquarters of the division must provide for alternate command facilities. This requirement can be accomplished by—

(*a*) Physically establishing an alternate command post by division and relocation of existing command post personnel and equipment.

(*b*) Designating the command post of a subordinate unit as the alternate command post of the parent unit.

(2) Because of the austerity of personnel and equipment, it is not possible for any unit of the division to establish complete, full time, alternate command posts. It is possible to establish skeleton installations consisting of the minimum of personnel and equipment necessary to provide emergency continuity of command until such time as they can be augmented.

(3) Currently, the most feasible method of providing an alternate command post for a major unit of the division is to designate the command post of a subordinate unit as the alternate. The primary consideration in selecting a subordinate unit headquarters as an alternate command post is that the communication equipment available must be adequate for command and control over all elements of the parent unit. Superimposing the communications requirements of a higher headquarters upon the facilities of a subordinate command post greatly reduces the efficiency of the subordinate unit. For this reason (SOP) standing operating procedures must provide for augmentation of the subordinate unit's communications means and every effort must be taken to reestablish command posts as soon as possible following their loss.

b. Division Alternate Command Post. The alternate for the division main command post is designated by the division commander. Depending upon the situation, he may prescribe one of the following as the alternate:

(1) Brigade command post.

(2) Division artillery command post.

(3) A battle group command post.

Section V. LIAISON

28. General

a. Liaison is the personal contact between elements of the division and higher, adjacent, subordinate, or supporting elements, which insures mutual understanding and unity of action.

b. Liaison is accomplished by commanders and staff officers as a normal part of their duties and by officers who are designated full-time liaison officers. The division chief of staff is responsible for establishing division level liaison in accordance with the desires of the commander and the policy of higher headquarters.

29. General Liaison Duties and Facilities

a. Duties. Duties of officers designated as division liaison officers are as follows:

(1) Prior to departure to establish liaison, become thoroughly familiar with the situation, plans, and policies of the division.

(2) Coordinate with the division staff and chief of staff to determine specific areas that require coordination.

(3) Obtain orders, if such are required, to substantiate authority and security clearance.

(4) Make arrangements for adequate transportation and communication facilities.

(5) On arrival at the headquarters to which sent, report to the commander (or appropriate staff officer) and become familiar with the unit's situation and plans.

(6) Secure and transmit to the division the required information.

(7) Keep abreast of the situation of the division and make this information available to the commander and staff of the unit visited.

(8) Make continuous reports on those matters within the scope of the liaison mission, keep appropriate records of these reports, and advise the commander of the visited headquarters of the contents of the reports.

(9) Avoid interference with the operations of the visited headquarters.

(10) Upon completion of liaison mission, notify the visited unit commander of expected departure.

(11) Upon return to the division, report the results of the liaison mission to the appropriate staff agency and transmit any requests of the commander of the unit visited.

b. Facilities. The division establishes a briefing facility at the division main command post to keep visiting liaison officers abreast of the division situation and plans. When a separate war room is established, briefing of liaison officers may be accomplished in this facility. If the division does not establish a war room (separate from the G2 and G3 sections), another facility must be provided to brief liaison personnel. To insure continuity of operations, liaison personnel are not briefed as a group in the G2 or G3 sections. However, individual liaison officers are authorized access to these sections as required in order to effect necessary liaison.

Section VI. ORGANIZATION FOR COMBAT

30. General

a. The many variations of the operational environments in which the infantry division must operate preclude the use of a fixed organization to deal with every situation. The division commander must place tactical, tactical support, and administrative support units into groupments best suited to the accomplishment of the mission. This organization for combat accomplishes two specific purposes; i.e., it combines adequate forces to accomplish each element of the mission and it facilitates command and control of these forces by the division commander and his staff.

b. The organization of the infantry division is specifically designed to provide flexibility in this tailoring of forces to fit the requirements of the mission and situation.

31. Considerations Affecting Organization for Combat

a. In organizing for combat, the division commander and staff consider the following general factors:

(1) The requirements of the mission.
(2) The enemy situation.
(3) The status of friendly tactical, tactical support, and administrative support units.
(4) The characteristics of the area of operations.
(5) The effective span of control of each controlling headquarters.

b. Specific considerations involved in organizing for combat during the offense, defense, and special operations are contained in chapters 6 through 10.

Section VII. SIGNAL COMMUNICATIONS

32. General

The ability of the division commander and staff to exercise command and control over the infantry division is directly dependent upon adequate, reliable, and flexible signal communications. The infantry division communication system described in paragraphs 82 through 84, meets these requirements. The overall division communications system provides—

a. A common user, radio, radio relay, wire, radio-wire integration, and messenger communication system.

b. Sole user division artillery command and fire direction radio and wire nets.

c. Unit command radio and wire nets.

d. Division command radio nets.

e. Division radio and teletype intelligence, operations, and administrative nets.

f. Division air request radio net.

g. Division warning broadcast radio net.

h. Terminals for higher and adjacent unit nets.

i. Radio equipment to operate in the spot report receiver system.

33. Effectiveness

The effectiveness of the division communication system is dependent upon a common understanding of the capabilities, limitations and method of employment of communications means. Responsiveness of the system is dependent upon early integration of unit signal officers into operational planning.

CHAPTER 3
TACTICAL UNITS

Section I. GENERAL

34. The Combined Arms Team

a. The infantry division is a team of the combined arms and services. The missions and roles for which it is designed dictate that it be weighted in infantry strength. It fights by employing a series of smaller combined arms teams each appropriately organized and supported to accomplish the missions assigned.

b. In organizing for combat the five battle groups, the armor battalion, the cavalry squadron, the artillery battalions, and any attached units of these types are the basic tactical units. They may be combined in varying proportions to form task groupings of the maneuver elements, the base of fire, and the reserve. Infantry, armor, cavalry, personnel carriers, and trucks are attached to task groupings as required by the situation. Artillery, chemical, engineer, aviation, signal, medical, ordnance, military police, civil affairs, and quartermaster units may also be attached but are usually assigned supporting missions.

c. The division organization permits a high degree of flexibility to meet the requirements of missions and situations. At each echelon of command, forces are grouped in a number of task groupings which can be controlled effectively. The division commander may use the brigade headquarters to control two or more battle groups and reinforcing elements when acting together to perform a single mission or task. He may form other task organizations under designated commanders.

d. Missions assigned the division may require the attachment or support of additional tactical units from corps or army. The principal tactical units which may be so employed are infantry, armor, cavalry, field artillery, and air defense artillery.

35. Formation of Task Forces

a. The division commander may form task forces when required for independent missions. Task forces may be formed based upon the brigade, a battle group, the armor battalion, the

cavalry squadron, or an element of one of these organizations. The composition of the task force is such that it provides its commander with the means required to accomplish his assigned mission. Task forces may also be provided additional tactical or administrative support in a supporting or reinforcing role. Task forces are frequently used when knowledge of the terrain and enemy situation together with unusually broad frontages and general missions preclude centralized control. The balanced task forces described in the sample standing operating procedure (app III) are suitable for operations of this type.

b. The mission, terrain, own and enemy situations are factors in determining the composition of the task force. It should be a balanced force including tactical, tactical support, and administrative support elements. All elements are attached to or placed in support of the unit or organization designated to command the operation. Since it is usually difficult to reinforce a task force during the conduct of independent operations, careful planning of its composition and organization prior to its commitment is necessary. Considerations in organizing task forces include—

(1) Reconnaissance and security.
(2) Communications over wide areas.
(3) Control means.
(4) Flexibility of organization.
(5) Fire support and other tactical support (engineer, aviation, chemical, etc.).
(6) Logistical support.
(7) Aircraft for movement and supply.
(8) Span of control of commander.
(9) Intelligence personnel support.
(10) Enemy strength, disposition, and capabilities.
(11) Availability of ground transportation.
(12) Terrain over which the task force will operate.
(13) Missions assigned to the task force.

c. When the armor battalion, cavalry squadron, or a battle group is the nucleus of a task force, it is usually commanded by the respective commander. A task force of more than one battle group is usually commanded by the assistant division commander using the brigade headquarters. However, for operations of short duration, one battle group may be attached to another.

d. The task force plan is based on orders issued by the division commander. In an operation where the task force is working closely with the remainder of the division, orders are generally

expressed in terms of terrain objectives and other control measures. In independent operations, a mission-type order with minimum control measures is normal. Operations are conducted in accordance with the principles outlined in subsequent chapters.

e. All appropriate elements of the division are trained in task force operations.

Section II. THE BATTLE GROUP

36. Mission

The mission of the battle group is to destroy the enemy by fire, maneuver, and close combat.

37. Organization

The battle group consists of a headquarters and headquarters company, a combat support company, and five rifle companies. Organization charts are contained in appendix II.

38. Capabilities

The battle group normally performs the infantry function of close combat but when suitably reinforced can perform armor and cavalry functions. The battle group is capable of—

a. Providing base of fire and maneuver elements.

b. Destroying or capturing the enemy by fire, maneuver, and close combat.

c. Operating in all types of terrain and under varying climatic conditions.

d. Conducting independent operations when properly reinforced.

e. Providing indirect fire support and antitank protection for organic and attached units.

f. Seizing and holding terrain.

g. Operating as a motorized, mechanized, or airmobile force when provided appropriate transportation.

h. Performing reconnaissance and security missions for larger forces.

39. Mobility

a. Although some elements of the battle group have organic vehicular mobility, the overall level of mobility is that of the dismounted soldier of the rifle companies.

b. The battle group can be completely motorized by 37 2½-ton trucks or mechanized with 67 armored carriers. The walking elements of the rifle companies can be transported on 75 tanks (1 rifle platoon per tank platoon).

c. The battle group is air transportable in heavy and medium transport aircraft. Airmobile task forces are readily formed from the battle group and its elements through the use of light and medium transport helicopters or light transport airplanes.

40. Support and Reinforcements

A committed battle group is usually supported by a field artillery howitzer battalion and an engineer company. Under some conditions tanks, transportation, and cavalry may be attached.

41. Employment

a. The battle group normally operates as an element of the division either as a major subordinate unit or under control of the brigade commander. When properly reinforced, the battle group may be assigned independent missions under corps or field army control.

b. Battle group task forces may be formed by the attachment of armor, cavalry, artillery, engineers, Army aviation, trucks, personnel carriers, and administrative support elements as required by the situation. The composition of the task force is designed to meet the need of specific tactical situations.

c. One or more companies of a battle group may be attached to another battle group, to the armor battalion, or to the cavalry squadron. Occasionally companies may be employed on independent missions or missions under control of the division or brigade commander.

d. The details of the battle group's operations are in FM 7–40.

Section III. THE ARMOR BATTALION

42. Mission

The mission of the armor battalion is to close with and destroy enemy forces using fire, maneuver, and shock action in coordination with other arms. In addition to this primary mission, it is the principal antitank means available to the division commander.

43. Organization

The armor battalion consists of a headquarters and headquar-

ters company and five medium tank companies. Organization charts are contained in appendix II.

44. Capabilities

The armor battalion normally performs the armor function for the division. When suitably reinforced, it can perform the cavalry function. The armor battalion is capable of—

a. Seizing terrain.

b. Holding terrain for limited periods of time.

c. Destroying enemy armor by fire.

d. Exploiting tactical advantages and opportunities.

e. Conducting independent operations when suitably reinforced.

45. Mobility

The battalion is completely mobile with organic transportation. It is not air transportable because its tanks and tank recovery vehicles cannot be airlifted in currently available aircraft.

46. Support and Reinforcements

When committed as a separate maneuver element, the armor battalion may be provided with artillery and engineer support as required by the mission. Frequently infantry will be attached to the battalion. If required, cavalry units may be attached.

47. Employment

a. The battalion may be employed under division control or attached to a battle group. One or more companies may be attached to battle groups and the battalion (minus) retained under division control or attached to a battle group. Under some conditions the battalion or one or more tank companies may be attached to the cavalry squadron.

b. When it is contemplated that the armor battalion will be reinforced with infantry or a battle group reinforced by tanks, the necessary attachments and detachments should be accomplished in sufficient time to permit formation of infantry-tank teams.

c. The battalion may be used as the nucleus for a task force.

d. The details of the battalion's operations are in FM 17–33.

Section IV. THE CAVALRY SQUADRON

48. Mission

The mission of the cavalry squadron is to perform reconnaissance and to provide security for the unit to which assigned or

attached and to engage in offensive, defensive, and delaying action as an economy of force unit.

49. Organization

The cavalry squadron consists of a headquarters and headquarters troop and three armored cavalry troops. Organization charts are contained in appendix II.

50. Capabilities

The cavalry squadron performs the cavalry function for the division. Under certain conditions and when suitably reinforced, it may perform limited infantry and armor functions. The capabilities of the cavalry squadron include—

a. Performing reconnaissance missions.

b. Performing security including counterreconnaissance missions.

c. Executing combat missions as an economy of force unit.

d. Conducting independent operations when suitably reinforced.

51. Mobility

a. Ground. The squadron is completely mobile with organic transportation.

b. Air. Except for the tank recovery vehicle, the squadron is air-transportable in heavy and medium transport aircraft. The light gun tanks and personnel carriers are air transportable under optimum conditions. In view of the cost in terms of aircraft required to lift this unit, i.e., one airplane per tank or armored carrier, its movement by air is undertaken only when demanded by strategic or tactical considerations.

52. Support and Reinforcement

The squadron is generally capable of performing its reconnaissance and security missions without additional support or reinforcement. When used in sustained combat, it requires artillery support and may be reinforced with armor, infantry, and engineers.

53. Employment

a. The squadron normally operates under division control. It is organized to operate as a unit; however, it may be attached in whole or in part to the brigade headquarters, a battle group, or the tank battalion. Occasionally a troop may operate directly under division control.

b. The squadron is frequently used to protect the flanks of the

division, to screen gaps between units, to provide flank or rear guards, or to provide a covering force for the division. The squadron or its troops may be used as a rear area security force.

c. The cavalry squadron, with or without reinforcements, may be used as an economy of force unit. It can conduct delaying actions, hold wide fronts lightly, and seize and hold terrain for short periods of time. The squadron can conduct feints, raids, and demonstrations. It is particularly suited to light offensive action where rapidity of movement is necessary as in the pursuit or exploitation.

d. The squadron is the principal ground reconnaissance unit of the division.

e. The squadron may be used as the nucleus of a task force.

f. The details of the squadron's operations are contained in FM 17–35.

Section V. DIVISION ARTILLERY

54. Mission

The mission of the division artillery is to support the division with nuclear and nonnuclear fires and to provide its component of the division communication, target acquisition, and fire support coordination systems.

55. Organization

The infantry division artillery organization includes a headquarters and headquarters battery, 5 howitzer battalions (infantry division field artillery howitzer battalion, 105mm and 155mm) and rocket/howitzer battalion (infantry division field artillery battalion, 762mm rocket self-propelled, 8-inch howitzer, towed). Two of the howitzer battalions are self-propelled, three are towed. This ratio may vary as dictated by both tactical and strategic considerations. Organization charts are included in appendix II.

56. Capabilities

a. The capabilities of the division artillery include—

(1) Supporting the combat action of the division with nuclear and nonnuclear fires.

(2) Performing countermortar and limited counterbattery fires.

(3) Collection and dissemination of survey and meteorological data.

(4) Assisting in the intelligence collection effort, particularly in target acquisition.

(5) Assisting in the collection of data for nuclear direct and indirect damage assessment.

(6) Receiving and controlling attached artillery units and coordinating the fires of supporting or reinforcing artillery.

(7) Providing personnel and equipment to assist the division artillery commander in discharging his responsibilities as fire support coordinator.

(8) Providing its portion of the division communication system.

b. The command post of division artillery can serve as an alternate division command post.

57. Mobility

a. Ground. The infantry division artillery units are completely mobile with organic transportation.

b. Air.

(1) Except for the tank recovery vehicle, division artillery is air-transportable in heavy and medium transport aircraft however, for air-landed operations, the self-propelled artillery weapons should be exchanged for towed weapons.

(2) The towed 105-mm howitzers are air transportable by medium transport helicopters of Army aviation units in single load configurations and in two loads by light transport helicopters.

58. Infantry Division Field Artillery Howitzer Battalion, 105mm and 155mm

a. Mission. This battalion provides direct or general artillery support including its portion of the infantry division artillery observation, liaison, communication, and survey systems.

b. Organization. The organization includes a headquarters and headquarters battery, one 105mm howitzer battery, and one 155-mm howitzer battery. Each howitzer battery has six howitzers. Organization charts are included in appendix II.

c. Employment. This battalion is organized to provide direct and continuous artillery support to include observation, communication, and liaison for the battle group or similar unit. When the battalion is not required to provide direct support to a committed unit, it may be employed in general support and/or reinforcing

roles. The battalion headquarters exercises fire control over the firing batteries and is responsible for providing survey and observation for them.

59. Field Artillery Battalion, 762mm Rocket, Self-Propelled, 8-inch Howitzer, Towed

a. Mission. This battalion provides general artillery support, nuclear and nonnuclear, to the division.

b. Organization. The organization includes a headquarters and headquarters battery, and 8-inch howitzer battery with 4 howitzers and an HONEST JOHN battery with 2 launchers. Organization charts are included in appendix II.

c. Employment. This battalion is normally employed in general support of the division to provide the nuclear and nonnuclear fires required by the division commander. The battalion headquarters is required to furnish survey control to the two firing batteries. Normally, the battalion exercises tactical control over the fires of the HONEST JOHN battery and technical fire control over the 8-inch howitzer battery, although the 8-inch battery has a full technical fire direction capability. If they are furnished survey control, the firing batteries can be employed individually directly under division artillery control, or in a reinforcing role to direct support artillery. Platoons of the HONEST JOHN battery and firing sections of the 8-inch battery can be employed separately for specific requirements for limited periods to provide reinforcement to direct support artillery battalions.

CHAPTER 4
TACTICAL SUPPORT

Section I. GENERAL

60. General

a. In the development of tactical plans, the commander cannot consider either of the two principal elements — firepower and maneuver — individually. By the same criteria the commander cannot consider his resultant combination of these two elements without considering the tactical support means available to him. Successful accomplishment of a mission is dependent upon leadership and the proper utilization of the means available to the commander.

b. Tactical support units available to the division commander include his organic units and those units that may be attached, in support, or otherwise responsive to the division.

61. Tactical Support Elements

a. Divisional Elements. The organic elements available to the division commander are the aviation company, engineer battalion, signal battalion, and the transportation battalion. Organization charts for these units are contained in appendix II.

b. Corps and Field Army Elements. Tactical support elements of corps and field army are available to support the division. These elements may be attached or placed in support of the division by the assignment of appropriate missions as required by the divisional mission and area of operations. These elements include corps and army artillery, military intelligence units, technical intelligence detachments, army security agency, army aviation, engineers, signal, chemical, transportation, and psychological warfare units.

c. Other Tactical Support. The division may also receive tactical support from other Services to include tactical air, naval gunfire, and amphibious support.

Section II. FIRE SUPPORT

62. General

a. Concept. The two principal elements of combat power are firepower and maneuver forces. Firepower as an element of combat power is composed of supporting fires directly controlled by the commander as well as those supporting fires that are available and responsive to him. The commander is responsible for the coordination of all available supporting fires—with each other and with the operations of his command—and makes basic decisions concerning the coordination of fire support.

b. Fire Support Coordinator. The senior artillery officer at each echelon of the division is the fire support coordinator and principal adviser to the commander on fire support matters. At division level the division artillery commander is the fire support coordinator, at battle group level, the fire support coordinator is the battalion commander of the direct support artillery battalion. At company level the artillery and heavy mortar forward observers work closely with the company commander in developing the fire support plan.

63. The Fire Support Coordination Center

a. The division fire support coordination center (FSCC) is the fire support coordination agency of the division. It operates under the general staff supervision of the G3. The FSCC is composed of the fire support coordinator (the division artillery commander, or in his absence the assistant fire support coordinator of the division artillery staff), representatives of organic and supporting fire support agencies, an ordnance guided missile and nuclear weapons staff officer, and other representatives required to plan and coordinate fire support. The fire support coordinator plans, recommends, coordinates nuclear and nonnuclear fires in accordance with the commander's guidance and is responsible for the detailed analysis of nuclear targets.

b. The G2 and represented fire support agencies provide target information and intelligence to the FSCC. Target intelligence is displayed in the FSCC and is used for target analysis and briefing purposes.

c. The FSCC is habitually located at the main command post adjacent to the G2 and G3 sections. Procedures must provide for continuous operations during displacement.

d. The size and composition of the FSCC is determined by the division commander, and may vary to meet the needs of the situa-

tion. In the planning phase prior to an operation, the FSCC may be enlarged to expedite the handling of the mass of details involved in planning and coordination. During the exploitation phase, the FSCC may be reduced to the minimum size required to implement the detailed plans, to effect departure from the detailed plans to meet unforeseen situations, and to engage targets of opportunity promptly. A typical infantry division FSCC may include, in addition to the fire support coordinator—

(1) Two assistant fire support coordinators (from division artillery staff).
(2) The G3 air.
(3) The G2 air or his representative.
(4) Representative of each fire support agency supporting the division.
(5) Target intelligence personnel.
(6) Target analysis personnel.
(7) Other advisers as required (e.g., ordnance guided missile and nuclear weapons staff officer, chemical officer).
(8) Supporting operations and communications personnel.

64. Fire Support Plan

a. Development. The coordination of fire support as accomplished in the FSCC is implemented by the fire support plan which is usually published as an annex to the operation order (plan). The basis of the fire support plan is the fire support portion of the commander's concept. The fire support plan implements that portion of the commander's concept dealing with fire support by providing specific orders and instructions to fire support agencies. The formality of this development varies with the echelon of command within the division. At company level the plan normally consists of no more than a target list. At battle group the plan becomes more comprehensive, the fire requests from the companies are coordinated and integrated with the battle group fires which may include nuclear fires, air, and naval gunfire in addition to artillery fires. Generally, at division level the fire requests from subordinate echelons are coordinated with division's requirements and are formalized into a fire support plan.

b. Division Fire Support Plan. The development of this plan includes the preparation and integration of the artillery fire plan, naval gunfire plan when applicable and the air fire plan. Normally, nuclear fires are included in the fire plans of each fire support agency and no separate nuclear fire plan is prepared. However, in exceptional cases when the quantity of information relative to

planned nuclear fires warrants, a separate nuclear fire plan may be prepared. When prepared, the nuclear fire plan will become an appendix to the fire support plan and will be referenced in other appendices as appropriate.

65. Fire Support Requests

a. Nuclear Fires. Requests for nuclear fires are approved by the commander authorized to request, or his authorized representative, and transmitted to the next higher command (fig. 3). Procedures are designed to insure rapid transmission and delivery of requests to the commander, or his representative authorized to act on the request. Notification of the request may also be sent through fire support channels to alert the fire direction center and to insure prompt delivery by using a concurrent transmission through fire support channels. Decision to employ, or not employ, nuclear weapons rests with the commander to whom the weapon is allocated or to his designated representative.

b. Nonnuclear Artillery Fires.

(1) Requests for nonnuclear artillery fires (except toxic chemicals and biological agents) go from the forward observer with the committed company directly to the fire direction center (FDC) of the supporting artillery battalion. This FDC will request any additional fires required from a reinforcing artillery unit if appropriate or from the FDC of the next higher echelon.

(2) Requests for delivery of toxic chemical and biological agents are processed in the same manner as requests for nuclear fire.

c. Air Support. Requests for tactical air support pass directly from the requesting unit to the G3 air who normally operates in the FSCC. The G3 air reviews and consolidates the requests and coordinates the request with the Fire Support Coordinator's representative. Those requests that can be fulfilled effectively by available Army fire support means are normally accepted by the fire support coordinator's representative. Other requests which are approved are submitted directly to the tactical air support element of the field army tactical operation center (FATOC) on the air request net. Division requests for tactical air support are monitored by the tactical air support element of the corps tactical operations center (CTOC). No action is taken by CTOC unless the division air request is to be disapproved. In this case the FATOC and the division G3 air are notified of the corps disapproval. (Functions of the FATOC, ICTOC, and CTOC are covered in FM 105–5 and TC 101–2.)

d. Naval Gunfire. Requests for naval gunfire are submitted through representatives of the naval commander supporting a ground operation. These representatives normally are part of an air naval gunfire liaison company (ANGLICO) (see FM 6–20). When naval gunfire is to be employed to attack a target, it is fired by the direct or general support ship(s) of the echelon concerned using naval gunfire procedures. If additional naval gunfire is required, assistance is requested of the next higher echelon.

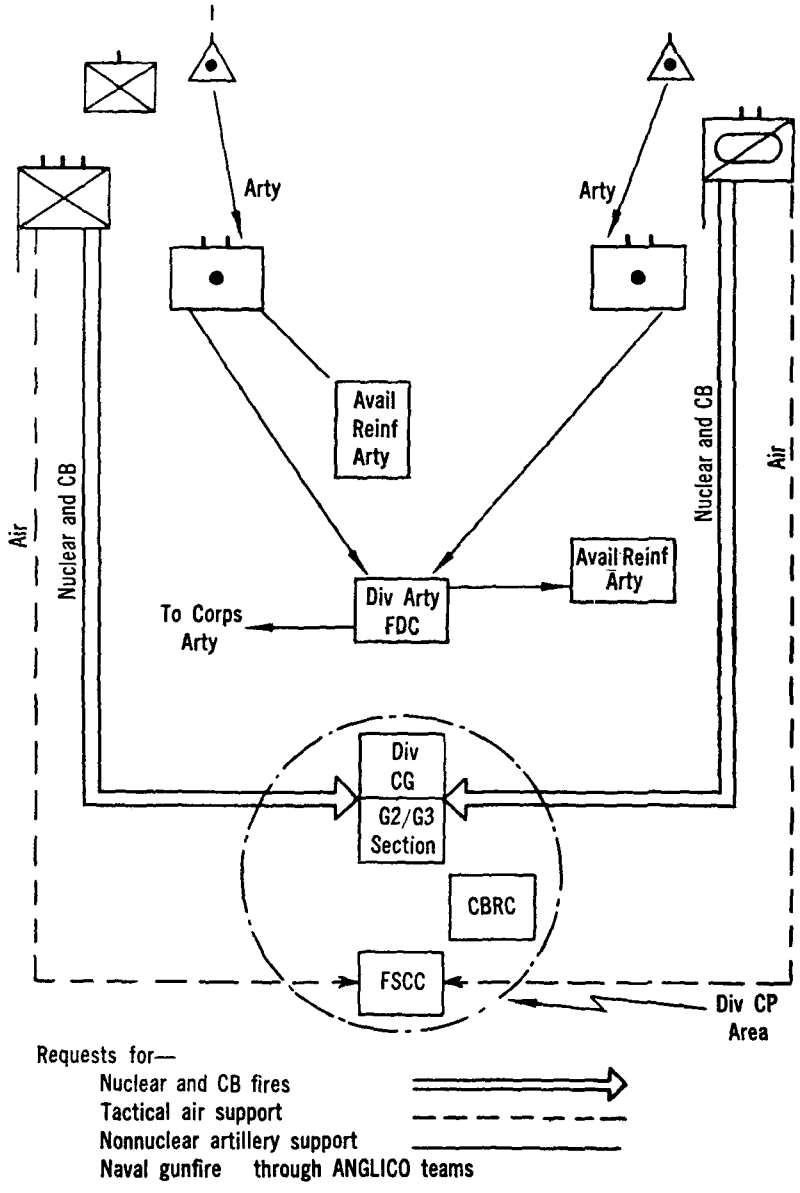


Figure 3. Fire support requests.

e. Channels of Fire Requests. Figure 3 illustrates the channels of fire requests.

66. Artillery Fire Planning

a. General. The artillery fire plan is published as an appendix to battle group and division fire support plans.

b. Development.

(1) Artillery fire planning begins with the company commander and the forward observer from the direct support artillery battalion. The company plan, which may be no more than a target list, is coordinated with the plans of other fire support means available to the battle group by the battle group fire support coordinator. Artillery requirements are forwarded to the FDC of the artillery battalion in direct support of the battle groups where the details of the artillery fire plan are completed. The battle group artillery fire plan is forwarded to the division artillery FDC and a copy is attached as an appendix to the battle group fire support plan. Battle group requirements for nuclear and CB fires are processed through command channels.

(2) At division level, the fire support coordinator in coordination with the G3 and chemical officer determines the division requirements for fire support. At the division FSCC these requirements are coordinated and placed upon the fire support agencies best suited to accomplish them. This is the basis of the division fire support plan. Artillery fire requirements (including nuclear and CB fires) are forwarded to the division artillery FDC where they are integrated with battle group fire requirements and the division artillery fire plan is prepared. The division artillery fire plan is disseminated to corps artillery with request for additional fires as required, to the division FSCC for appending to the division fire support plan, to artillery battalions with the division and to adjacent division artilleries.

c. Artillery Fire Planning Channels. Figure 4 illustrates artillery fire planning channels.

67. Fire Coordination Measures

a. Boundaries. In addition to their use in delimiting areas of responsibility, boundaries also serve as a measure for coordinating fire support. When nuclear fires employed by one force will have

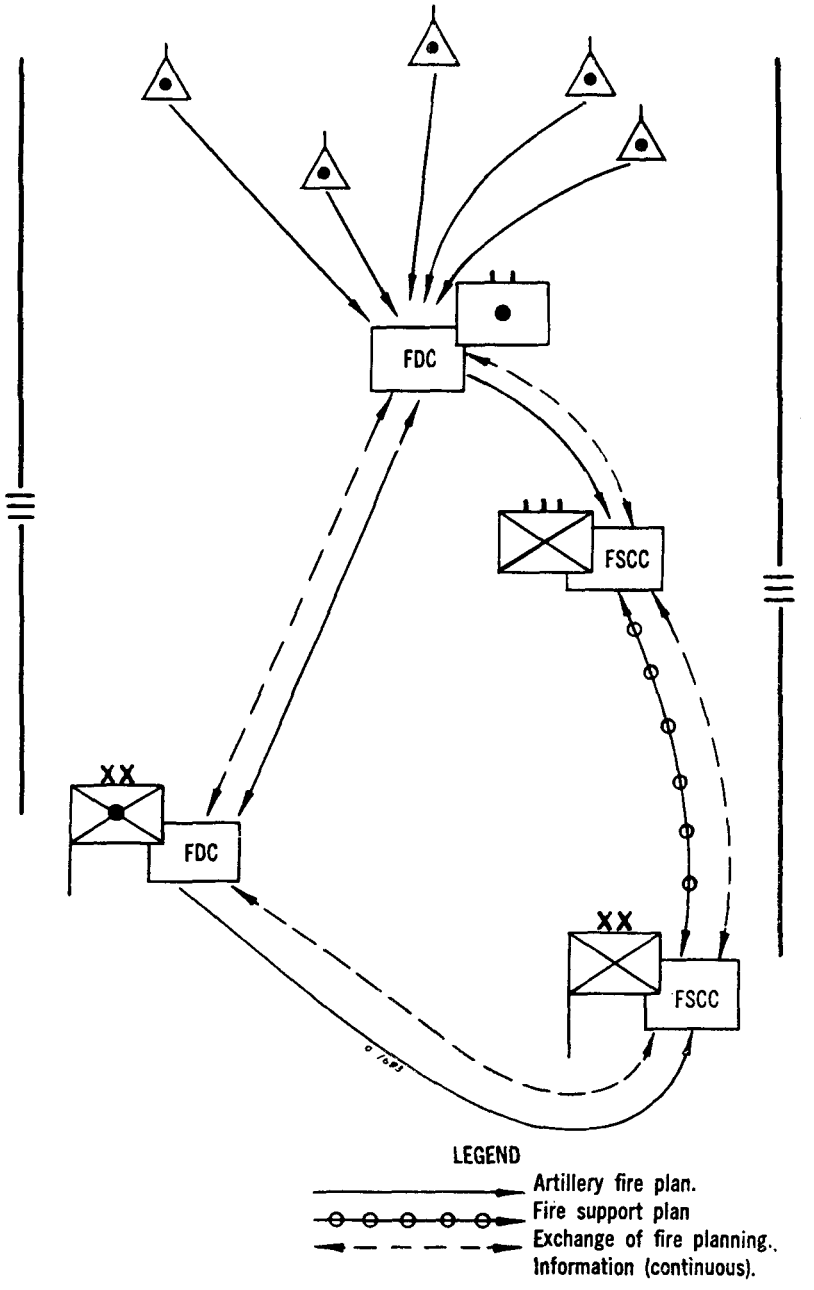


Figure 4. Artillery fire planning channels.

casualty or damage producing effects in the zone of an adjacent force, these fires must be coordinated with and approved by the adjacent force.

b. No-Fire Line. The no-fire line is a line beyond which artillery units may fire without prior clearance from the direct support artillery, providing no more than negligible effects occur short of the line. The location of the no-fire line is established by the direct support artillery commander in coordination with the supported unit commander.

c. Bomb Line. The bomb line is a line designated by ground forces, beyond which air attacks may be executed without clearance from the ground forces, providing no more than negligible effects from the use of nuclear or nonnuclear weapons occur short of the line.

d. Nuclear Safety Line. Nuclear safety lines are imaginary lines, selected if possible to follow well defined geographical features, used to coordinate ground action with nuclear attacks. They may be used to establish areas wherein our troops must observe certain protective measures, to designate limits of advance of friendly troops before specified unacceptable effect from planned nuclear fires are encountered, or to prescribe limits to which certain effects of friendly weapons may be permitted to extend in the direction of friendly troops. The exact usage of each nuclear safety line must be explained in paragraph 3, "Coordinating instructions," of the operation order.

e. Fire Coordination Line. This line is established to coordinate fires between airborne forces and link-up forces or between two converging forces. It is used to regulate flat-trajectory and high angle fires as well as offensive airstrikes. Units will not fire beyond this line without coordinating with the unit on the other side.

Section III. AIR DEFENSE ARTILLERY

68. General

a. Air defense of the field army area of responsibility is provided by the field army air defense commander through the air defense artillery brigade. This defense is provided by air defense missile units in conjunction with the air defense (both missile and aircraft) provided by theater. Corps provide air defense within their areas in coordination with the army air defense commander. The division is afforded some protection by army and corps air defense weapons, which may or may not be positioned in the division area. Additional protection may be provided by attaching air

defense artillery units to the division when the situation so dictates.

b. Within the division, plans for the employment of attached air defense artillery units are coordinated with adjacent and higher headquarters. The air defense intelligence means of the attached air defense artillery units remain integrated with the corps air defense intelligence system, which permits early warning, transmission of flash messages, and dissemination of appropriate information and instructions pertaining to air defense.

c. Commanders at all echelons will utilize passive measures to prevent detection by enemy aircraft and to minimize effects of an air attack. Such measures include dispersion, use of cover, concealment, and camouflage, and establishment of an adequate warning system. In the event of an air attack, all available fire is delivered on the attacking aircraft. Positively identified low-flying enemy aircraft may be taken under fire, even though the unit is not under direct attack, when the unit's location is probably known to the enemy.

69. Employment of Attached Air Defense Artillery Battalions

a. When a forward area air defense artillery battalion is attached to the division for local air defense purposes, this battalion is normally retained under division control.

b. The present forward area air defense artillery battalions are the automatic weapons battalions (self-propelled). They are employed to defend vital areas or units based on the priority established by the division commander. The number of fire units required to defend any one element is dependent upon the mission, plans, importance of element, weapon capabilities, terrain, and the air situation. Normally, air defense automatic weapons are deployed by battery, though deployment by smaller units is also possible.

c. The size of the division area and the dispersion of division elements normally make it impracticable to defend the entire division area with forward area air defense weapons. The sites selected for the air defense weapons should be compatible with the requirement to deliver ground fire when such secondary use does not interfere with the primary mission of air defense.

d. Elements of the division should be provided with air defense during movement. The size of the element determines the required number of fire units. Critical points along the route of march should receive particular attention and be provided air defense protection. Air defense batteries should be with the leading ele-

ments and interspersed throughout the column to provide protection during movement.

e. Upon movement into assembly areas, the automatic weapons units should be among the first units to arrive in order to establish air defense of those areas.

Section IV. INTELLIGENCE SUPPORT

70. General

Intelligence is a basic requirement for the successful planning and conduct of military operations. The intelligence capabilities of the division, in addition to those agencies of higher echelons that are available to support the division's intelligence activities, must be understood and exploited. Detailed intelligence procedures are prescribed in FM 30–5 and other appropriate field manuals.

71. Flow of Information and Intelligence

a. The division G2 section must be capable of processing a mass of information quickly. As this information is processed into intelligence, the G2 section will insure timely dissemination of this intelligence to all staff sections and to higher, lower, and adjacent units.

b. The requirement for a swiftly functioning intelligence system is greatly assisted by the division area communication system. Other means and methods that speed intelligence include—

(1) A separate intelligence net provides direct communications between division headquarters and major subordinate tactical units.

(2) Timely information may be obtained by selective monitoring of the radio transmissions of subordinate units.

72. Reconnaissance

a. General. Effective reconnaissance provides much of the information necessary for the conduct of operations. All divisional units must exploit their organic reconnaissance capability, and the activities of these units must be coordinated and integrated with the division's reconnaissance operations and tactical plans.

b. Ground Reconnaissance. Each major maneuver unit of the division has an organic ground reconnaissance capability. The division cavalry squadron is the principal ground reconnaissance unit of the division. Aggressive ground reconnaissance is a positive means of determining disposition and identification of enemy forces. The greater the dispersion of the battlefield, the greater

is the requirement for reconnaissance and the more readily patrols can penetrate and develop enemy positions.

c. Air Reconnaissance. Air reconnaissance should be conducted unceasingly and in conjunction with ground reconnaissance. The G2 must exploit the capabilities of Army aviation in addition to those of the Air Force.

(1) *Army aviation.* Army aviation may be used either in a primary air reconnaissance role or in support of ground reconnaissance elements. The division aviation company has an aerial surveillance capability employing visual observation and sensory devices to include photography and radar. It also has the capability for battle area illumination. Helicopters may expedite the results of patrols and extend their range by moving them to their starting points in enemy territory and picking them up at prearranged locations. Requests for aerial reconnaissance missions for intelligence purposes are coordinated by G2 air.

(2) *Tactical air force.* The reconnaissance wings of the tactical air force include reconnaissance-fighter and reconnaissance-bomber type aircraft. Reconnaissance-bomber type aircraft normally provide night photographic, electronic, weather, and limited visual reconnaissance information. The reconnaissance-fighter aircraft perform visual and photo air reconnaissance missions over the forward areas as well as at great distances beyond the forward edge of the battle area, as required. Requests for Air Force reconnaissance missions are coordinated by division G2 air and forwarded to the G2 Air Group of TASE, field army tactical operations center.

73. Agencies

a. Divisional Agencies. All units of the division are potential information collecting agencies. However, those that come in contact with the enemy such as the armor battalion, artillery battalions, aviation company, battle groups, and the cavalry squadron are the principal contributing agencies.

b. Nondivisional Agencies. The division has several agencies available to support its intelligence operations in addition to higher and adjacent headquarters. These are—

(1) *Military intelligence detachment.* A military intelligence detachment is normally attached to the division. This detachment provides specialists in photo and imaginary

interpretation, language translation and interpretation, order of battle, prisoner of war interrogation, and security. Details are contained in FM 30–9.

(2) *U.S. Army Security Agency division support company.* This company will normally support the division by providing communication intelligence and a means of assisting in the maintenance of communication security. The communication intelligence extends the depth of intelligence operations and contributes significantly to target acquisition. The G2 insures that the U.S. Army Security Agency unit is kept informed of division operations and intelligence requirements (AR 10–122).

(3) *Combat electronic warfare company.* A combat electronic warfare company may be attached to or support the division. This unit furnishes information and intelligence of enemy electronic equipment, organization, and locations by the detection and study of enemy electromagnetic emissions from other than nuclear detonations and communication sources. The G2 keeps the company informed of current intelligence requirements.

(4) *Technical service intelligence detachments.* Each technical service maintains intelligence detachments. These detachments are available to support the division as requested by the division G2. See FM 30–16 for a detailed discussion.

(5) *Air weather service detachment.* These detachments are normally stationed at field army and corps headquarters. From them the division G2 may obtain weather observations, weather briefings, weather reports, weather summaries; detailed operational and planning forecasts; and climatological information. An Air Force weather officer may be attached to the division.

74. Target Acquisitions

a. The tactics of the nuclear battlefield and the tremendous firepower available within and responsive to the division make target acquisition one of the most important intelligence objectives.

b. In addition to the reconnaissance and surveillance means and equipment within the division, there are elements specifically organized and equipped for target acquisition. In the battle group, the counterfire squad of the heavy mortar platoon is equipped with sound ranging equipment. Division artillery has a target acquisition platoon in each battalion. The division artillery headquarters battery has a target acquisition platoon including counter-

mortar radar and surveillance radar equipment. The aerial surveillance platoon of the aviation company is equipped with airborne visual, photo, and electronic surveillance equipment.

c. Target acquisition results from applying information collected from all sources and agencies. The difference between target acquisition and other types of information gathering is one of degree. The targets must be detected, identified, and located in three dimensional coordinates with sufficient accuracy and speed to permit effective delivery of fire.

d. The G2 has general staff responsibility for coordinating target acquisition means available to the division.

75. Surveillance

a. Fluidity of action and wide dispersion on the nuclear battlefield dictate continuous (all weather, day and night) surveillance of the battle area to provide timely information to support tactical operations. This surveillance involves the systematic observation of air, surface, or subsurface areas of the battle area by visual, electronic, photographic, or other means for combat intelligence purposes.

b. The combat and fire support units of the division have been provided sensory devices to permit surveillance during periods of limited visibility. The battle group has a surveillance radar section in the combat support company; division artillery has a surveillance radar section in the target acquisition platoon of division artillery headquarters battery; the cavalry squadron is equipped with surveillance radar; the armor battalion is equipped with surveillance radar and infrared equipment; and the aviation company has airborne surveillance equipment in the area surveillance platoon.

c. The G2 coordinates the activities of the divisional surveillance means into an integrated effort to insure complete coverage of the division's area of operations.

76. Counterintelligence

a. Effective counterintelligence increases the security of the division and aids in the achievement of surprise by denying information to the enemy by active and passive measures. Active counterintelligence measures block the enemy's attempts to gain information or to engage in sabotage or subversion, by counterreconnaissance, counterespionage, and countersabotage. Passive measures conceal information from the enemy and include censorship, secrecy discipline, security of classified documents and materiel,

signal communications and security, movement control, the use of concealment, camouflage, electronic counter-countermeasures, and control of civil population.

b. Counterintelligence specialists are not organic to the division. A security section, containing counterintelligence specialists, is organic to the military intelligence detachment that is normally attached to the division. The senior officer of the security section is usually designated as chief of the counterintelligence branch of the G2 section.

77. Intelligence Support of Tactical Cover and Deception Operations

a. Tactical cover and deception operations are a primary G3 responsibility; the intelligence aspects of these operations, however, must be mutually and completely coordinated with the G2.

b. The division G2 must insure that the intelligence aspects of tactical cover and deception operations are consistent with intelligence operations of the next higher headquarters.

c. See FM 31–40 for detailed information on tactical cover and deception measures and planning.

78. Radiological Monitoring and Survey

a. Radiological monitoring and survey is an integral part of the overall intelligence effort. Collection of radiological data is planned and coordinated by the Chemical, Biological, and Radiological Center (CBRC) under the general staff supervision of the G2.

b. Radiological monitoring and survey teams are trained by each subordinate unit of the division which is authorized monitoring and survey equipment. The principal division level agencies which conduct radiological monitoring and survey are the division aviation company and the cavalry squadron.

Section V. ENGINEER SUPPORT

79. Division Engineer Battalion

a. Mission. The primary mission of the engineer battalion is to increase the combat effectiveness of the division by means of general engineer work. A secondary mission is to undertake and carry out infantry combat missions when required.

b. Organization. The engineer battalion is organized with a headquarters and headquarters company and five engineer com-

panies. Organizational charts and tables are contained in appendix II.

c. Capabilities. The capabilities of the engineer battalion include the following:

(1) Providing engineer staff planning and supervision for organic and attached engineer troops.
(2) Providing the personnel for the operation of the division engineer section.
(3) Performing construction, repair, and maintenance of roads, bridges, fords, and culverts.
(4) Providing support of hasty stream-crossing operations with boats and rafts; coordination of organic and attached engineer troops for deliberate river crossing.
(5) Assisting in the removal of obstacles, including mines and booby traps.
(6) Assisting in the emplacement of obstacles, including mines and booby traps.
(7) Preparing and executing demolitions, including employment of prepositioned nuclear weapons.
(8) Assisting other troops in preparation of fortifications and camouflage.
(9) Performing engineer reconnaissance and intelligence.
(10) Providing general construction, including construction of army airfields and helicopter landing sites.
(11) Performing construction and placement of deceptive devices.
(12) Providing engineer class II and IV supplies.
(13) Providing engineer third-echelon maintenance support.
(14) Providing water purification and supply.
(15) Providing maps in accordance with operational requirements established by the G2.
(16) Providing assistance in assault of fortified positions.
(17) Assisting in performing radiological decontamination of personnel and areas.

d. Mobility.

(1) *Ground.* The battalion is completely mobile with organic transportation.
(2) *Air.* The battalion is air-transportable in heavy transport aircraft except for the 3 medium tanks, with dozer and the 3 bridge launching tanks.

e. Employment.

(1) The engineer battalion is a self contained unit designed to provide an optimum combination of equipment and individual skills for forward area engineer tasks. Proj-

ects are normally accomplished by combat companies or by platoons. They may be reinforced with engineer construction equipment and operators and with river-crossing equipment from headquarters and headquarters company, when required. The companies or platoons may be employed in a direct support, general support, or attachment role to assist the division in the accomplishment of its mission. In general, greater flexibility and efficiency in the overall engineer effort are realized by retaining the elements of the battalion under battalion control. Normally, engineer units are not held in reserve. When tactical, terrain, or climatic conditions warrant, engineer units are attached to infantry units. When feasible, the same engineer units should support the same infantry units for operational efficiency. When it is necessary to commit engineer troops as infantry, it is preferable to maintain engineer unit integrity.

(2) Engineer unit attached to, or in direct support, of battle groups coordinate their effort with that of the battle group engineer platoon.

(3) When the cavalry squadron, armor battalion, or task force organizations are committed on separate missions, the engineer battalion provides the necessary engineer support.

(4) Engineer staff support for the brigade headquarters, when committed, is provided by the division engineer section.

(5) Engineer staff support for the FSCC is provided when necessary by the division engineer section.

80. Nondivisional Engineer Support

a. When the requirement for engineer support within the division exceeds the capability of the divisional battalion, additional engineer support must be provided by the next higher echelon of command.

b. The additional engineer support provided to the division may range from reinforcing the combat engineer strength to the provision of such support as bridging, construction, mapping, survey, camouflage, and deception.

c. Nondivisional engineer units may be attached to or placed in support of the division. However, engineer units are not attached when their missions may be accomplished in the supporting role. All engineer support provided to the division is coordinated by the division engineer.

81. Prepositioned Nuclear Weapons

a. Potential targets for prepositioned nuclear weapons are considered by the G2 and G3 sections. Normally, the engineer will also be called upon to present reasons for the retention or elimination of specific targets. He may assist in target analyses on proposed targets and recommend—

(1) Quantity, type, and yield of weapons.
(2) Height or depth of burst.
(3) Desired emplacement site location.
(4) On-call detonation or times of burst.
(5) Troop and civilian safety precautions.

Subsequent to the decision to employ an atomic demolition munition, the engineer is responsible for designating the emplacing and firing unit, and coordination of the supply and movement of equipment, materials, and personnel to support the mission.

b. Normally the officer responsible for the execution of a mission requiring a prepositioned nuclear weapon will be the commander of the engineer emplacement and firing unit. Engineer personnel install the nuclear weapon and prepare the emplacement site which may include provision of appropriate access roads; installing antitank and antipersonnel minefields or other obstacles as ordered; camouflaging the area; providing local security; and providing communication facilities.

Section VI. SIGNAL SUPPORT

82. Division Signal Battalion

a. Mission. The mission of the signal battalion is—

(1) To provide signal communications, to include communications to subordinate units, for the—
  (*a*) Division headquarters and headquarters company, exclusive of staff vehicle radio sets.
  (*b*) Division trains headquarters and the headquarters and headquarters detachment, infantry division trains and infantry division band, exclusive of staff vehicle radios.
  (*c*) Division rear echelon including the division administration center and the infantry division administration company, exclusive of staff vehicle radios.
  (*d*) Brigade headquarters, exclusive of staff vehicle radios.
(2) To establish and operate a division area communication system of area signal centers, wire and radio trunk and local lines, and radio/wire integration stations to provide general and direct communications support for units in the division area.

(3) To operate the division ground messenger service.

(4) To perform photography (except aerial photography) for the division, and still picture laboratory service for all divisional units.

(5) To provide signal supply and field maintenance of signal equipment for the division.

b. Organization. The signal battalion consists of a headquarters and headquarters company, a command operations company, and a forward communications company. Organization charts are contained in appendix II.

c. Capabilities.

(1) The capabilities of the battalion include—

(*a*) Providing communications for those headquarters, installations, and units listed in paragraph 81*a*(1) on a 24-hour basis, to include message center, messenger, cryptographic, teletypewriter, and radio including radio relay (with exceptions noted).

(*b*) Establishing and operating a division area communication system consisting of up to 8 area signal centers, 12-channel radio relay or field cable links, and field wire lines as required, to provide—

1. Trunk line and signal center service for the headquarters and units designated in paragraph 81*a*(1).

2. Trunk line service for administrative and tactical support units in the division area.

3. Field wire, FM radio/wire integration, radio relay, or field cable links to connect using units into the division area communication system.

4. Signal center service for unit elements and installations in the division area as required to supplement organic communication means.

(*c*) Operating the division area ground messenger service within the general capabilities of up to six motor messenger teams.

(*d*) Performing photographic service for the division to include—

1. Ground still and motion picture coverage for the division; and when required, aerial still and motion picture coverage using ground cameras.

2. Provision and operation of two mobile photographic laboratories and the processing of ground and army aerial still photographic coverage for all divisional units.

(*e*) Provides signal supply and field maintenance (including avionic maintenance) of signal equipment authorized the division (ch. 5).

(2) The battalion is dependent upon—

(*a*) Other units for medical, dental, and religious services and supplemental transportation.

(*b*) Aviation company for aircraft and pilots for signal operations.

(*c*) Corps and army to provide and operate division terminals of radio relay and field cable circuits for corps and army.

(*d*) Army or other higher echelons for processing motion picture and Air Force aerial photographic coverage.

d. Mobility.

(1) *Ground.* The mobility varies among the companies of the battalion as follows:

(*a*) Headquarters and headquarters company—30 percent mobile.

(*b*) Command operations company—80 percent mobile.

(*c*) Forward communications company—90 percent mobile.

(2) *Air.* The battalion is air transportable in heavy and medium transport aircraft.

83. Division Area Communication System

The division signal battalion employs the area communication system concept to satisfy the requirements for communication within the division.

a. Under this concept, area signal centers or switching points are established throughout the division area of operations to support the dispersed elements of the division. The signal centers are interconnected by multichannel radio relay and, when the situation permits, by field cable, in such configuration as to provide alternate routes between any two points in the system. The rear echelon signal center is not designated to be employed as a part of the division area communication system because of its frequent location outside the division area.

b. The area signal centers provide—

(1) Points of entry into the system for the supported headquarters, units, and installations to facilitate their use of trunk lines and channels in the system.

(2) Terminal, testing, patching, and switching facilities for the radio relay and field cable trunks and local lines.

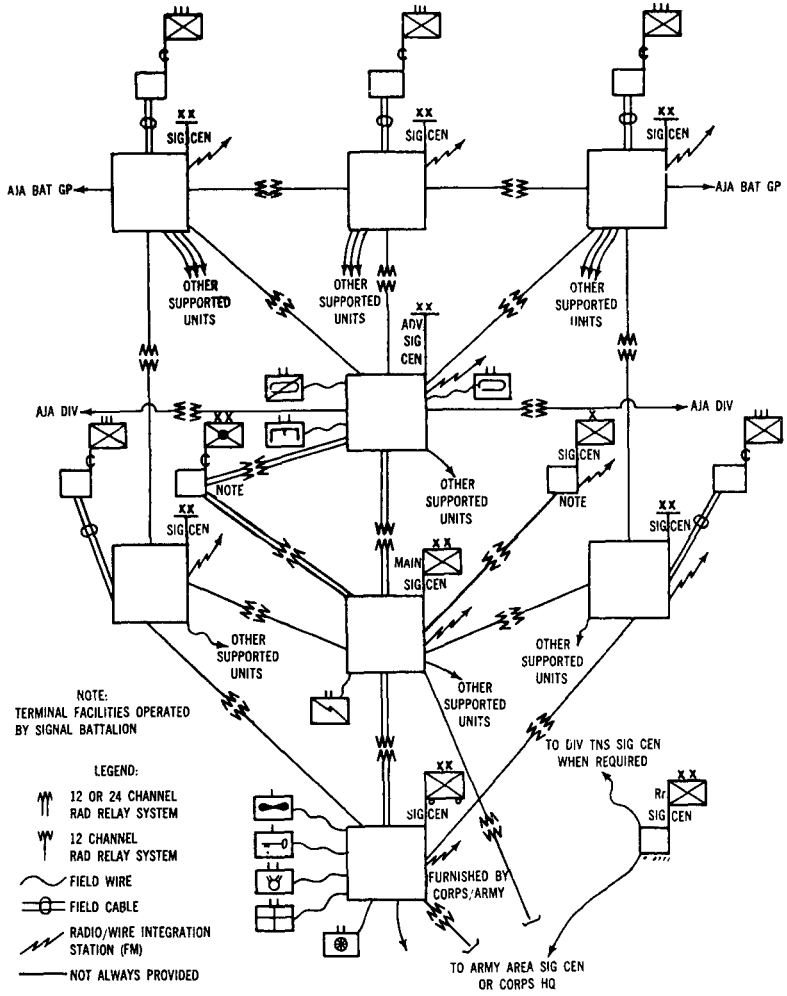


Figure 5. Type infantry division area communications system. (Schematic only. Troop dispositions, operational requirements, enemy capabilities, and other factors dictate the configuration.)

(3) Local communication center facilities, to include message center, messenger (except at forward signal centers), cryptographic, teletypewriter, and telephone switchboard service for other units and installations as required to supplement organic capabilities.

(4) Means for interconnection of the division area communication system, the corps communication system, and the army area communication system.

c. The trunk lines in the division area communication system provide—

(1) A means of communication from the echelons of division

headquarters to immediate subordinate elements and between these elements.

(2) Long line channels for the use of other divisional elements in lieu of or to supplement organic communications. These may be provided on a common-user or sole-user basis as required.

d. Area signal centers in the division area communication system generally are located with or near the major divisional elements. Each forward signal center will be located in the vicinity of a battle group command post. The basic system is extended to other users by field wire or by FM radio/wire integration links.

84. Communications Employment

a. Communications Control. The division frequency utilization section operates under the supervision of the division signal officer as an aid to the maintenance and operation of the division communication system. Direction finding sets are employed to pinpoint and identify sources of communication and electronics interference, enemy or friendly, as reported by divisional units. This section also assists the cavalry squadron and aviation company in locating or confirming the location of targets at which electronic radiating devices are used.

b. Communication Centers. Communication centers are operated as components of each signal center within the division area communication system. Cryptographic, teletypewriter, and messenger facilities are associated with each communication center. A facsimile facility is provided only at the main signal center. The communication centers located at the main command post of division headquarters, division trains headquarters, and division rear echelon serve not only those headquarters but also the units and installations in the vicinity. The communication centers at the forward signal centers serve the units and installations in their vicinity on an area basis as required to supplement the capabilities organic to those elements.

c. Radio Relay. Radio relay is the primary means for long lines communication in the division area communication system. It is also the primary means for telephone service between the major headquarters in the division. Division terminal equipment and operating personnel for the radio relay circuits in the corps/army communication systems are provided by corps/army units. Individual companies of the signal battalion are assigned areas of responsibility for installing terminals in the system.

(1) The command operations company installs terminals for the division main command post, advance signal centers

(when established), brigade headquarters, division trains headquarters, the division rear echelon, and division artillery headquarters.

(2) The forward communication company installs the terminals at the five forward area signal centers.

(3) Headquarters company maintains a pool of terminals and repeater equipment for installation and/or augmentation as needed in the system.

d. Wire and Cable Installation. The signal battalion has a limited capability for installing field cable, since radio relay is the primary means of trunk-line communication throughout the division area system. When required, assistance from corp/army units may be requested. The amount of cable authorized by the TOE does not reflect the total cable the battalion may be expected to install. Additional cable may be requisitioned from division signal supply and army supply points or depots. Consequently the cable and field wire capability may be increased or decreased as the situation warrants.

e. Radio Nets. Radio nets within the division and division units are provided primarily for internal organizational communications and for communication between major divisional units. Additional radio equipment is provided for air warning systems and communications with echelons above division. Radio can be used in an emergency or fast moving situation to supplement or extend a segment of the radio relay system. The individual radio nets illustrated in figure 6 are:

(1) *Division command/operation, intelligence and administrative/logistics nets (AM-RATT).* The signal battalion and other division units are equipped to operate 3 separate functional radioteletype nets: 1 for command operations, 1 for intelligence operations, and 1 for administrative and logistical operations.

(2) *Division GG/command net (FM-voice).* This net is intended primarily for communication between the division commander and staff and the commanders of all immediate subordinate units. The number of stations in the net dictates restrictions on its use. While specific employment of the net will be governed by the individual commander's desires, it is expected that lateral communications between subordinate commanders will be established by the calling commander entering the FM net of the called commander. Airborne relay stations are established by the aviation company when required.

UNITS	ARMY AIR RQST AM RATT	ARMY LOG AM RATT	CORPS COMD AM RATT	DIV COMD/OPNS AM RATT	DIV INTELL AM RATT	DIVCG COMD FM VOICE	DIV ADM/LOG AM RATT	DIV AIR RQST AM CW-VOICE	DIV WARNING AM VOICE
ARMY	GRC 26	GRC 26							
CORPS	GRC 26		GRC 26						
ADVANCE SIGNAL CENTER				GRC 46 (S)	GRC 46 (S)	VRQ 3 (S)			GRR 5 1 (S)
DIV MAIN		GRC 26 (S)	GRC 26 (S)	GRC 26 (S)	GRC 46 (S)	VRQ 3 (S)	GRC 46 (S)		GRC 19 (S)
DIV REAR							GRC 26 (S)		
DIV FSCC	GRC 26 (S)							GRC 19 (S)	GRR 5 3 (S)
BRIGADE				GRC 46 (S)		VRQ 3 (S)			GRR 5 3 (S)
DIV ARTY				GRC 46	GRC 46	VRC 10	GRC 46 2		GRC 19
BG (S)				GRC 46	GRC 46	VRQ 3	GRC 46 2	GRC 19	GRR 5 1
ARMOR BN				VRC 29		VRC 10	VRC 29	GRC 19	GRR 5 1
CAV SQDN				VRC 29	VRC 29	VRC 10	VRC 29	GRC 19	GRR 5 1
AVN CO				GRC 46	GRC 46	VRC 10	GRC 46 2		GRR 5 3
DIV TRAINS				GRC 46 2 (S)		VRC 18 (S)	GRC 46 (S)		GRR 5 3
ENG BN				GRC 46		VRC 10	GRC 46 2		GRR 5 3
ORD BN						VRC 10	GRC 46		GRR 5 3
MED BN						VRC 18	GRC 46		GRR 5 3
TRANS BN						VRC 10	GRC 46		GRR 5 3
QM CO						VRC 10	GRC 46		GRR 5 3

1—Monitors net; enture by switching set from another net.
2—Entwe not as required by switching set from another net.
3—Monitors only.
(S)—Personnel and equipment furnished by div sig bn.

Figure 6. Type radio nets, infantry division.

(3) *Division warning/broadcast net (AM-voice).* This net broadcast air alerts, CBR attack warnings, radiological safety data, nuclear strike warnings, fallout warnings, and similar information of an urgent operational nature which applies to the division as a whole or to major divisional elements, which need not be handled through command channels, and for which no immediate receipt or reply is required. Division headquarters, division artillery headquarters, battle group headquarters, the cavalry squadron, and the armor battalion have radio

sets that may transmit in this net as required. Division artillery headquarters operates a station in this net to broadcast air alert status, and the cavalry squadron is normally authorized to broadcast urgent reconnaissance information in this net. Each battalion and separate company is equipped with AN/GRR–5 receivers for receiving information broadcast in this net.

(4) *Division air request radio net (AM-voice/CW).* The net control station is operated by the signal battalion and is located at the division FSCC for the joint use of the G2 air and G3 air. The battle group headquarters, cavalry squadron, and armor battalion are also provided radio sets for operating in this net.

(5) *Army air request net (AM-RATT).* The signal battalion operates the division station in the army air request net. This terminal is also located at the division FSCC for the joint use of the G2 air and the G3 air.

(6) *Army logistics net (AM-RATT).* The signal battalion is equipped to operate the division terminal in an army logistics net. Although this station is designed to handle administrative and logistical traffic, it may be employed to support displacement in a fluid situation.

(7) *Spot report receiver system (UHF-voice).* This station, operated by the signal battalion, is located in the same vehicle as the division station in the army air request net. It is used to monitor close air support missions flown for the division by the Air Force. A separate set is provided for use by the G2 to monitor Air Force reconnaissance missions. The battle group headquarters, division artillery headquarters, the cavalry squadron, and the armor battalion are also equipped with UHF-voice radio sets for use in the spot report receiver system.

f. Radio/Wire Integration Stations. An FM-voice radio/wire integration station is operated at each signal center (except the rear echelon) to connect mobile FM radio stations into the division area communication system. The system of integration stations is used to establish communications between mobile FM radio stations and elements connected to the area communication system by telephone. The stations may also be used for initial establishment of telephone service from the area communication system to using units (until wire circuits can be installed), and as FM radio relay stations to establish communications between FM radio stations operating beyond direct FM range.

Section VII. ARMY AVIATION SUPPORT

85. General

The mission of Army aviation is to augment the Army's capability of conducting prompt and sustained combat operations on land. The organic Army aviation is responsive to the demands of ground force commanders. It is employed to enhance the mobility, flexibility, and combat efficiency of ground combat forces. For details on Army aviation, refer to FM 1–100, FM 1–5, and FM 57–35.

86. Division Aviation Company

a. Mission. The mission of the aviation company is to increase the combat effectiveness of the infantry division by providing the division and its elements with immediately responsive aviation support.

b. Organization. The aviation company contains an operations platoon, aerial surveillance platoon, direct support platoon, general support platoon, service platoon, division aviation section, and communication section. The organizational chart for the aviation company is in appendix II.

c. Capabilities. The aviation company provides—

(1) Continous (day and night) operations during visual weather conditions and limited operations under instrument weather conditions.

(2) Aerial observation, reconnaissance, and surveillance of enemy areas for the purposes of locating, verifying, and describing targets, terrain study, adjusting artillery and mortar fire, and contributing to target acquisition.

(3) Aerial photography consisting of daylight vertical and oblique photography and night vertical photography from manned and drone aircraft.

(4) Aerial radar surveillance.

(5) Radiological monitoring and survey.

(6) Battlefield illumination.

(7) Limited movement of troops, supplies, and equipment within the combat zone.

(8) Command liaison, reconnaissance, and transportation.

(9) Aerial wire laying, radio relay, and propaganda leaflet dissemination.

(10) Limited aeromedical evacuation from the immediate battlefield.

(11) Courier and messenger service.

(12) Individuals of this company can fight as infantrymen when required, and the company can defend itself and installations against hostile ground attack.

d. Mobility.

(1) *Vehicular.* The company is 100 percent mobile with use of aircraft.

(2) *Air.* The company is air-transportable in heavy troop carrier aircraft, however, the organic aircraft must be disassembled.

e. Employment.

(1) The aviation company is normally employed in two echelons, forward and rear.

(*a*) The forward echelon consists of the aerial surveillance platoon, and the direct support platoon, augmented by aircraft from the general support platoon and elements of the operations platoon and service platoon as required. The direct support platoon is composed of the artillery support section and five combat support sections which operate independently from the base airfield, satellite airfields, airstrips, or landing areas to support combat elements of the division.

1. The aerial surveillance platoon is composed of both manned and drone aircraft. It provides immediately responsive aerial radar, visual, and photographic surveillance and target acquisition for the general support of the division. The aerial surveillance platoon may be employed under the operational control of a subordinate headquarters of the division such as the cavalry squadron.

2. The artillery support section provides aviation to division artillery and normally is employed under operational control of division artillery commander for target acquisition and aerial adjustment of fire.

3. The combat support sections provide the nucleus for support of a battle group or task force organization, and normally operate under the operational control of the battle group commander. The same combat support section normally supports the same battle group. It receives additional aircraft from the general support platoon as required.

(*b*) The rear echelon consists of company headquarters, communication section, operations platoon, general

support platoon, service platoon, and the attached transportation aircraft maintenance detachment. The rear echelon normally operates from the base airfield established in the division service area. It is responsible for reinforcing the direct support platoon and supporting the remainder of the division.

1. The operations platoon provides the personnel and equipment for the control and operations of the division airfield(s).

2. The communications section provides internal communications support and equipment for operation in the division command net, intelligence net and administration/logistics net (AM-RATT), and division GG/command net (FM voice).

3. The general support platoon is composed of observation and utility fixed wing aircraft and, observation, light transport, and utility helicopters. With these aircraft it provides support to the division and augments the direct support platoon as required.

4. The service platoon provides organizational maintenance to the aircraft of the company. The attached transportation aircraft maintenance detachment provides third echelon aircraft maintenance.

(2) Observers will be provided by the combat elements of the division.

(3) All aircraft of the division aviation company may be utilized, as required, to fly radiological monitoring and survey mission.

87. Nondivisional Army Aviation Support

a. Army transport aviation units are assigned to the field army and normally are attached to corps to support tactical operations. They support the tactical operations of a corps by being further attached to or placed under operational control of subordinate corps units for specific missions. Normally, they are not attached below division level.

b. With the rather limited capabilities of the division aviation company recognized, consideration should be given to the use of the support available from the Army transport aviation battalions. Plans for employing units using Army transport aviation can encompass operations up to and including the tactical airlift of battle groups. Requests for Army transport aviation support for tactical operations are made through command channels.

88. Employment of Army Transport Aviation

Army transport aviation can be employed to assist ground elements on the following missions:

a. Rapidly exploiting the effects of nuclear weapons.

b. Enveloping defended areas or traversing natural barriers which hinder the seizure of an objective.

c. Seizing key terrain features, particularly in fluid operations such as pursuit, exploitation, and advances to contact.

d. Reinforcing or evacuating isolated units.

e. Movement of reserves, particularly in defense of a wide area.

f. Supply of critically needed items.

g. Concentrating dispersed forces for execution of a tactical operation.

h. Dispersing forces as may be required following a phase of operations.

i. Combating partisan or guerrilla forces.

j. Attacking enemy airborne or air-landed forces.

k. Movement of reconnaissance forces and patrols.

l. Evacuation of patients.

m. Ship-to-shore movement in amphibious operations.

n. Performing radiological monitoring and survey.

Section VIII. TACTICAL GROUND TRANSPORTATION

89. General

The nuclear battlefield increases the requirement for efficient day and night movement. To provide the surface mobility required, the division has a pool of transportation in the transportation battalion. In addition to the divisional battalion, the field army has transportation truck units and tactical carrier battalions that may be used to support division operations. The light truck companies may be used in tactical movements, and the tactical carriers may be used to mechanize division infantry units for combat operations.

90. Division Transportation Battalion

a. Mission. The mission of the infantry division transportation battalion is twofold: first, to provide tactical mobility to assault elements of an infantry division; and second, to provide the infantry division with a pool of vehicles for logistical movement of personnel and supplies.

b. Organization. The transportation battalion consists of a headquarters and headquarters company, two armored carrier companies, and a truck transport company. Organizational charts are contained in appendix II.

c. Capabilities.

(1) At full strength this unit provides the following:

(*a*) Cross-country mobility to assault elements of an infantry division.

(*b*) Capability for infantry units to exploit rapidly the effects of mass destruction weapons.

(*c*) Logistical and administrative general transportation for the division.

(2) At full strength, based on 75 percent vehicle availability the truck transport company transports in 1 lift:

(*a*) 240 short tons of general cargo, or

(*b*) 1,200 personnel, or

(*c*) Any appropriate combination thereof.

(3) At full strength, based on 75 percent vehicle availability, each of the 2 armored carrier companies has a minimum capability of transporting the following in 1 lift:

(*a*) 440 personnel, or

(*b*) 60 short tons of cargo, or

(*c*) Any appropriate combination thereof.

(4) This battalion is dependent upon the infantry division administration company for personnel administration.

d. Mobility.

(1) *Vehicular.* The battalion is 100 percent mobile.

(2) *Air.* The battalion, except for the two tank recovery vehicles, is air-transportable in heavy transport aircraft.

91. Tactical Employment of the Transportation Battalion

a. Truck Company. The truck company is designed to operate as a unit, but platoons or squads may be employed if required. For tactical operations the company may be attached on a mission basis or for a specific time period, or may be placed in support of division units. The company is under the operational control of the division transportation officer when it is not attached to division units.

(1) *Commitments.* A number of the available trucks will be required each day for unit distribution of class I supplies, and a number of the trailers may be used for on-wheel storage of division reserves of class I supplies. The tactical lift capability of the company is dependent upon the number of trucks committed to logistical support

functions. The 1,200 troops lift capability cited in paragraph 90*c*(2) is based on 20 men per truck, 75 percent availability of trucks, and all available trucks being used for tactical troop lift.

(2) *Support of tactical operations.* When all or a part of the truck company is attached to a combat element to provide transportation support, orders for their operations will be provided by the unit receiving the attachment. Normally the support mission will be to provide mobility to the combat element, which is to transport troops to the assembly area or position, withdraw into defilade, and, after the objective is taken, pick up the combat troops to enable rapid dispersion and/or proceed to the next objective. While combat elements are actively engaged, the truck elements must provide their own security against airborne or guerrilla attacks.

b. Armored Carrier Companies.

(1) *Carrier capabilities.*

(*a*) The carrier, with its limited armor protection, provides protection to personnel or cargo from small-arms fire and friendly or enemy light artillery or mortar airbursts. It can move with safety through antipersonnel minefields. Its armor protection also provides a degree of protection from the blast, thermal, and radiation effects of nuclear weapons. The radios in the carrier platoon headquarters and the carrier squads are used by the command elements of the assault forces for control purposes.

(*b*) The carrier can support the attack or defense of the infantry and provide some air defense protection with the fire of its caliber .50 machinegun. The gun may be fired from its vehicular mount or from ground mount when a ground mount is available.

(*c*) The carrier has cross-country mobility, but its movement is noisy and easy to detect, especially at night.

(*d*) The carrier is capable of moving across fairly calm rivers or other bodies of water.

(*e*) The capability of the company as stated in paragraph 90*c*(3) of 440 personnel is based upon the normal loading of 11 men per carrier in addition to the driver, with 75 percent availability of carriers and all available carriers being utilized for troop transport. With 40 carriers available, a carrier company can transport 10

rifle platoons while maintaining rifle platoon integrity.

(2) *Utilization and control.* The carrier company is designed to operate as a unit, but platoons and squads may be employed separately. The companies are under the operational control of the division transportation officer when they are not attached to division units.

(*a*) *Logistical use.* To insure availability for tactical support mission, use of the carriers for logistical use will be limited (ch. 5).

(*b*) *Tactical use.* The carrier's mobility, armor protection, communication, and firepower provide a complementary weapon for the fulfillment of infantry missions. For tactical operations the company may be attached on a mission basis, or for a specific period of time, or may be placed in support of division units. Normally the company will be attached to an infantry battle group on a mission basis. During periods of attachment to the infantry, employment of the carrier company is prescribed by the infantry commander. For tactical employment by the battle group, see FM 7–40.

Section IX. CHEMICAL SUPPORT

92. General

Authority to initiate employment of toxic agents does not rest with the division commander. Guidance relative to the employment of toxics will be received through command channels. There are no restrictions on the initial employment of nontoxic agents such as flame, smoke, and defoliants. After use of toxic agents is authorized, operations involving the employment of toxic chemical agents will normally be planned and executed by the division subject to policy restrictions of the theater commander. Operations involving the use of toxic biological agents will normally be planned and executed by corps and higher units. The division commander may authorize subordinate units, operating separately, to employ toxic agents.

93. Dissemination of Chemical Agents, Smokes, and Incendiaries

a. Armor. Armor is capable of employing toxic chemicals against enemy tanks and strong points; flame at enemy strong points; and smoke to blind, conceal, or signal.

b. Artillery. Artillery is capable of firing concentrations of toxic chemical agents by means of guns, howitzers, rockets, and

missiles. It is also capable of establishing smoke screens, blinding enemy observation posts, and signaling by means of smoke ammunition. By means of incendiary ammunition, artillery is capable of destroying enemy material.

c. Engineers. The division engineers furnish technical advice and assistance to the division in laying and clearing composite minefields which include toxic chemical land mines.

d. Infantry. Infantry units are capable of employing toxic chemical agents, fiame and incendiaries, smokes, and riot control agents. Infantry weapons capable of disseminating chemical agents are for toxic chemicals, mortars and rockets; for flame, flamethrows, and flame expedients; for smoke, mortars, rockets, and grenade launchers; and for incendiaries, grenade launchers.

94. Division Chemical Officer

The division chemical officer is an adviser to the commander and staff on matters relating to CBR warfare tactics, training, and logistics.

The chemical officer—

a. Recommends the use of chemical agents in tactical operations.

b. Advises on CBR defense.

c. Assists in planning chemical participation in barrier and denial operations.

d. Exercises operational control over attached chemical units.

e. Processes technical intelligence pertaining to CBR warfare.

f. Conducts technical inspection of Chemical Corps equipment and supplies, to include the organizational maintenance of such equipment and supplies.

g. Arranges for chemical corps supply and maintenance support from higher echelons.

h. Directs the division chemical biological and radiological center (CBRC).

95. Division Chemical, Biological and Radiological Center (CBRC)

a. The Division chemical, biological, and radiological center—

(1) Participates with the FSCC, and other interested agencies, in recommending targets to be attacked with nuclear weapons.

(2) Controls and coordinates the employment of chemical, biological, and radiological agents.

(3) Coordinates the employment of chemical, biological, surveys in the commander's area of responsibility.

(4) Advises the commander and his staff concerning the specific effects of radiological, chemical, and biological contamination from both friendly and enemy employment.

(*a*) Computes predicted fallout from nuclear strikes.

(*b*) Predicts within current capabilities the effects of chemical and biological agents.

(*c*) Maintains a CBR situation map.

(*d*) Disseminates CBR information.

b. The division G2 and G3 have joint general staff supervision over the operation of the CBRC concerning matters listed in *a* above.

Section X. PSYCHOLOGICAL WARFARE

96. General

One loudspeaker and leaflet company is organic to a field army and is available to support division operations. This company has a printing and loudspeaker capability. In addition, a mobile radio detachment from the radio broadcasting and leaflet battalion of theater army may be attached to the company.

a. Loudspeakers. The loudspeaker is the basic medium used for the dissemination of specific short-range tactical propaganda. Loudspeakers are used primarily in tactical and consolidation operations. Appeals may be designed to deliver ultimatums to small groups, to encourage surrender of individuals or small units, to weaken tactical unit morale, to control prisoners of war and civilians, and to assist in civil affairs. Normally, one loudspeaker team will be attached to a division.

b. Leaflets. Leaflets offer the widest variety of use in both strategic and tactical operations. They range in form from newssheets to appeals; in purpose, from general information to specific action; in means of dissemination, from artillery shells and aerial bombs to patrols and agents; in target, from large civilian groups to a particular small military unit.

97. Planning

An assistant division G3 is assigned responsibility for the planning and integration of psychological warfare in support of division missions. Requests for psychological support are submitted through the corps psychological operations officer (FM 33–5).

CHAPTER 5
ADMINISTRATIVE SUPPORT

Section I. GENERAL

98. Introduction

a. The term "administrative support," as used herein, includes personnel, logistics, and civil affairs functions. It also refers to the organizations, facilities, material resources, systems, procedures, and controls necessary to the performance of these functions. Administrative support in the division includes the support required by attached nondivisional units. It may also include some support for nondivisional units present in the division area even though such units are not attached to the division.

b. The impetus of administrative support within the division is from rear to front. Administrative support is so organized and conducted, as to permit combat commanders to concentrate their attention, efforts, and resources on combat tasks. The system must operate habitually in such a manner that combat commanders feel completely assured of the required administrative support. This assurance is essential to the realization of the full combat power potential of the division.

c. Rear area security and area damage control are closely related and are vital to the successful planning and conduct of administrative support.

99. Administrative Support Means

a. Personnel and Equipment. The division includes sufficient administrative support personnel and equipment to sustain itself in most circumstances. During periods of unusual demand, nondivisional support units may be attached to the division or placed in support thereof.

b. Resupply and Replacement. The division must rely on administrative support from a higher commander to replenish its supplies and to replace its personnel losses.

c. Local Resources. The division may use local civilian labor and materials to meet a portion of its administrative support needs. These resources are frequently suitable for construction, road maintenance, and the handling and movement of supplies.

d. Captured Materiel. Whenever feasible, the division makes use of captured supplies and equipment to increase its capabilities and to reduce the quantities of supplies which must be brought forward from rear areas.

100. Division Rear Area and Division Trains Area

a. Division Rear Area. The division rear area extends from the division rear boundary forward to the area of responsibility of the committed tactical units of the division. The division rear area delineates the territorial responsibility of the trains commander for rear area security and area damage control. Tactical reserves, artillery units, and other tactical support elements may at times be located in the rear area. Normally, the areas occupied by these elements are excluded from the territorial responsibility of the trains commander.

b. Division Rear Boundary. The division commander, or his representative, recommends the location of the division rear boundary to the next higher commander. This boundary should be located—

(1) To provide only the room required for the division's combat and administrative support operations.

(2) To be easily identifiable.

c. Division Trains Area. The area in which the majority of division administrative support elements are located is termed the division trains area. A precise demarcation of this area is not usually accomplished unless the division rear area has not been defined or is extremely large.

101. Main Supply Route

The division will normally designate one or more main supply routes (MSR). Conditions which favor the designation of multiple MSR are enemy use of nuclear weapons, operations in a relatively wide zone, availability of engineer support from a higher commander, wide deployment of tactical units, and a well developed road net. It is desirable that MSR be two-way, all weather roads. When only one MSR is designated, it should be centrally located with respect to supported units.

102. Employment of Means

a. Administrative support units are normally employed under division control. When a combat element is dispatched on an independent mission, certain divisional administrative support elements may be attached to it. Otherwise, service units operate in a supporting role.

b. Administrative support may be organized on an area basis, a task basis, or a unit support basis. Normally a combination of all three is employed within the division.

Section II. CONTROL OF ADMINISTRATIVE SUPPORT

103. General

Administrative support operations are planned and controlled to insure the tactical success of the division. Control insures that essential tasks are performed, that the priorities in which they are performed correspond to the tactical situation, that the administrative support system is immediately responsive to changes in the situations of supported units, and that all resources are efficiently utilized.

104. Division Logistics Control Center (DLCC)

a. Concept. The division may establish a DLCC to coordinate, regulate, and expedite administrative support of the division. The DLCC is a division staff facility, under the general staff supervision of the G4, in which representatives of the general staff, division trains commander, and appropriate special staff officers work to coordinate those administrative support activities which—

(1) Require high priority or emergency action.

(2) Are closely interrelated to one or more other administrative support activities.

(3) Compete for the same, or limited, resources.

b. Functions.

(1) The following functions are normally performed in the DLCC—

(*a*) Expediting high priority and emergency supply and service actions.

(*b*) Coordinating the use of transportation used in administrative support operations.

(*c*) Processing requests for aerial resupply.

(*d*) Operating the division traffic headquarters.

(*e*) Operating the division ammunition office (when the location of the DLCC does not require ammunition resupply vehicles to detour).

(*f*) Division level planning for rear area security and area damage control.

(2) The following functions may be performed in the DLCC if the situation is such that they fall into one of the categories listed in *a* above:

(*a*) Scheduling the consolidation and delivery of supplies moving from division distribution points or army supply points to using units.

(*b*) Coordinating, for the division surgeon, the use of cargo transportation for medical evacuation.

(*c*) Coordinating prisoner of war evacuation.

(*d*) Coordinating recovery and disposition activities.

(*e*) Coordinating battlefield recovery of damage equipment and salvage operations.

(*f*) Coordinating maintenance activities.

c. Information. To facilitate coordination, the DLCC maintains and disseminates information concerning—

(1) Location of organic and attached elements of the division, with particular attention to their command and logistical installations.

(2) Location of logistical installations supporting the division.

(3) Status of supply in division distributing points.

(4) Status of basic loads of conventional ammunition and prescribed nuclear loads.

(5) Vehicle availability data.

(6) Maintenance data as required.

(7) Status of Army aircraft assisting in the administrative support of the division.

(8) Traffic plans for division, corps, and adjacent unit areas.

(9) Route conditions.

d. Composition and Organization.

(1) The composition of the DLCC varies according to dictates of the situation and the desires of the division commander. A minimum representation is normally prescribed in the division SOP, and variations are directed as required.

(2) Minimum representation in the DLCC normally includes—

(*a*) Officer-in-charge. (The officer-in-charge may be either the G4, G4 representative, or the trains commander at the discretion of the division commander.)

(*b*) G4 representative.

(*c*) Division traffic headquarters.

(*d*) Ordnance representative division ammunition officer (may be when the location of the DLCC permits).

(*e*) Quartermaster representative.

(*f*) Provost marshal representative.

(*g*) Necessary administrative and communications personnel.

(3) Additional representation in the DLCC as required—

(*a*) Assistant G4—maintenance officer.

(*b*) Representatives of other divisional technical and administrative services.

(*c*) Army aviation representative.

(4) When the division trains commander is designated as officer-in-charge of the DLCC, elements of his staff may be located in the DLCC to facilitate direction of rear area security and area damage control operations. When the trains commander is not the officer-in-charge, he may furnish liaison to the DLCC and direct rear area security and area damage control from the division trains command post.

(5) An example of the organization of a DLCC is shown in figure 7. The internal arrangement is shown in figure 8.

e. Relationships. The authority of the officer-in-charge of the DLCC to coordinate, regulate, and expedite administrative support operations derives from the authority of the division commander and is limited to matters covered by established policy. Matters which require action contrary to policy or are not covered by policy are referred to the G4. The relationships between the DLCC and other elements of the staff, between the DLCC and subordinate units of the division, and between the DLCC and

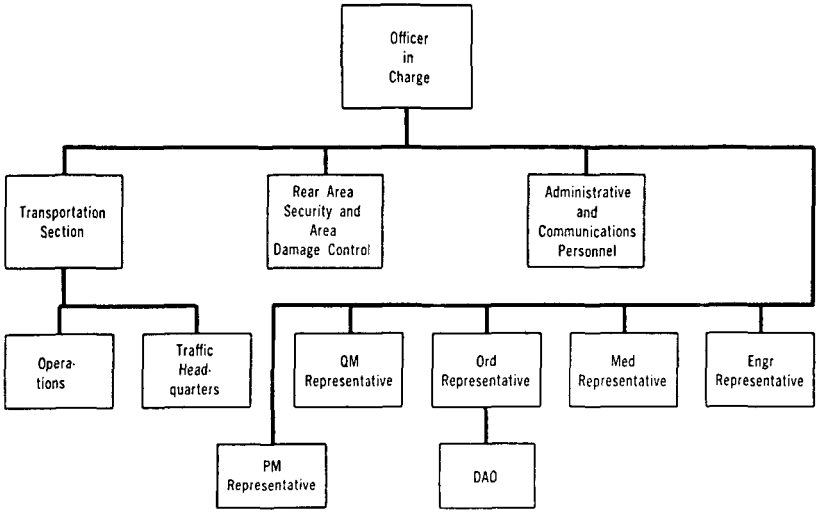


Figure 7. Typical organization of the DLCC.

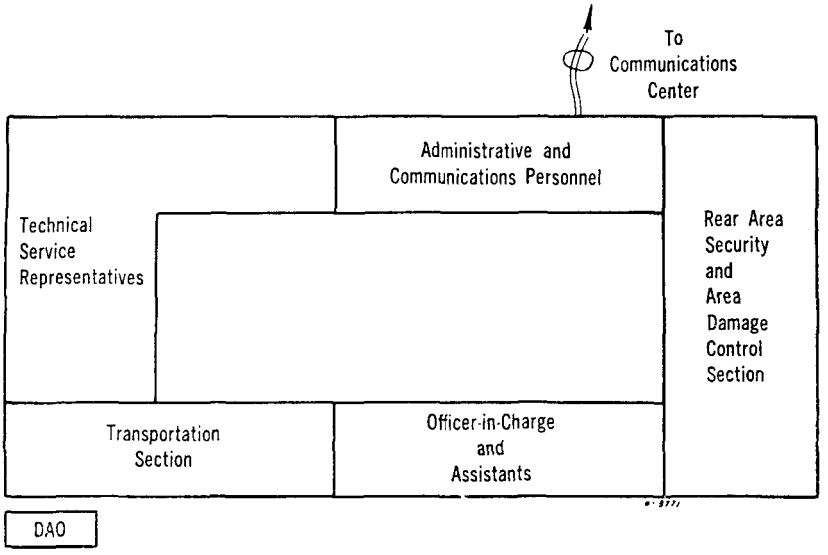


Figure 8. A possible arrangement of the DLCC (schematic only).

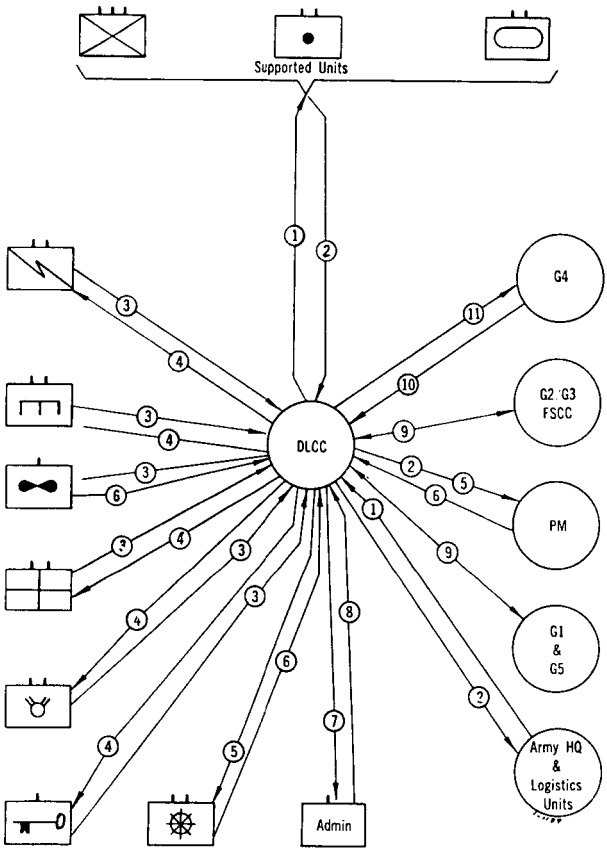
higher headquarters are portrayed graphically on figure 9. The flow of information and instructions in two typical actions by the DLCC is shown in figures 10 and 11.

f. Location. The DLCC is located in the vicinity of Division Trains Headquarters so that it can be served by the trains area operations platoon of the command operations company, division signal battalion. It should be easily accessible to the road net. The DLCC displaces on order of the division commander, based on the recommendation of the G4. It displaces in two echelons to permit continuous operations.

g. Support. Equipment and other administrative support for the DLCC are furnished principally by the headquarters and headquarters detachment, division trains and the division headquarters and headquarters company. Additional support may be drawn from other units, depending on representation in the DLCC.

105. Division Trains Commander

a. General. The division trains commander is a tactical commander. He is responsible to the division commander for all tactical activities of division trains. The division trains commander facilitates accomplishment of technical operations by close coordination with service unit commanders and staff officers, but he is not responsible for the administrative and technical operations of the service units.



1. Information concerning plans for logistical support; requests for information concerning logistical situation.
2. Information and emergency requests.
3. Transportation requirements for logistical support purposes; information concerning logistical situation.
4. Instructions for furnishing logistical support; orders and supervision concerning rear area security and area damage control.
5. Instructions for the dispatch of transportation on logistical support tasks; orders and supervision concerning rear area security and area damage control; traffic regulation and route information.
6. Information concerning status of transportation, intelligence information for rear area security and area damage control; route information; logistical situation in supported units.
7. Orders and supervision concerning rear area security and area damage control; information concerning plans for the logistical support of personnel activities.
8. Transportation requirements for personnel activities; information affecting rear area security and area damage control.
9. Detailed coordination and integration of logistical support activities with other activities of the division.
10. Instructions and supervision.
11. Information of the logistical situation

Figure 9. Relationships between DLCC and other elements.

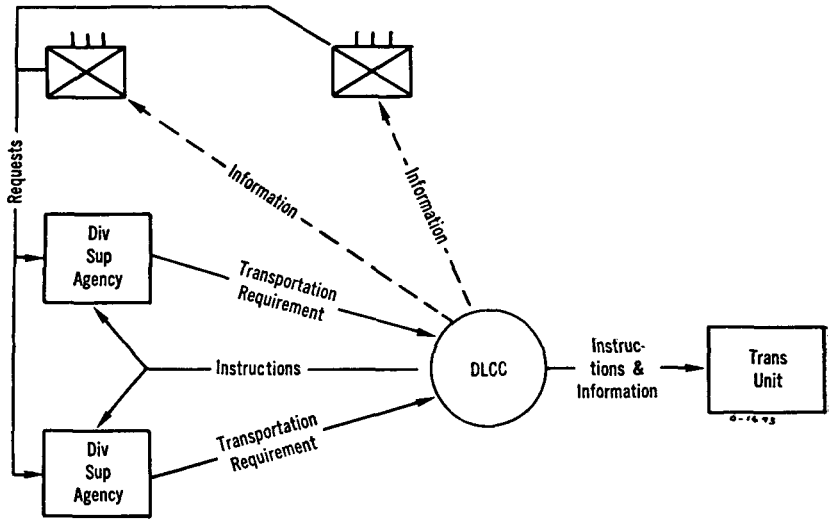


Figure 10. Routine supply, DLCC schedules consolidation and delivery to supported units.

b. Duties. The division trains commander is responsible for—

(1) Tactical command of all components of division trains physically located in the division rear area.

(2) Organization of division trains for movement and disposition within the division rear area.

(3) Movement of division trains in accordance with tactical plans. This duty includes route and trains area reconnaissance, selection of the division trains area in coordination with G3 and G4, and posting of guides.

(4) Protection and security of division trains on the march and in the division rear area.

(5) Tactical training of personnel of division trains, to include marksmanship, marches, bivouacs, security, and defensive combat.

(6) Supervision of internal administrative support within elements of division trains.

(7) Conduct of inspections to determine the fitness of division trains units to perform tactical functions in the field.

(8) Coordination and implementation of rear area security and area damage control plans for the division rear area.

(9) Supervision of organizational maintenance in units attached to division trains.

(10) Exercising special and summary court martial jurisdiction and nonjudicial punishment under Article 15, *Uni-*

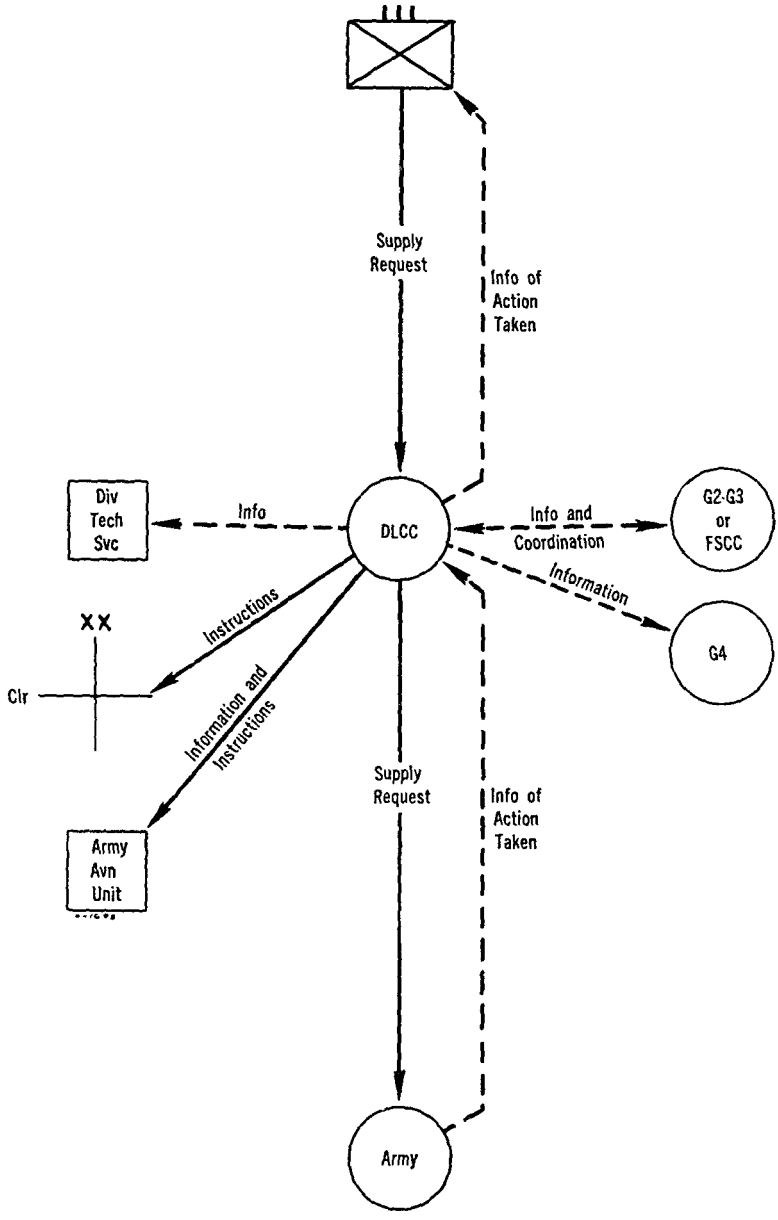


Figure 11. Emergency supply by Army aviation: returning aircraft evacuate casualties.

form Code of Military Justice, over organic and attached administrative support units.

106. Control Measures

a. General. The planning and control of administrative support operations in the infantry division are relatively centralized. The principal measures by which administrative support is made responsive to tactical needs are—

(1) Rapid and timely exchange of information.

(2) Timely issuance of orders.

(3) Arrangement of requirements according to priority.

(4) Proper location and movement of administrative support facilities.

(5) Speed and precision in staff action.

b. Exchange of Information.

(1) There must be a complete exchange of information within the division staff to insure that administrative support plans are fully integrated with tactical plans. Tactical planners must be fully aware of any limitations imposed by the status of administrative support. Administrative support planners must know the tactical plan and situation in detail so that operations can be properly supported.

(2) Tactical and tactical support unit commanders must make their needs known to the division commander and his staff in sufficient time to permit the necessary movement of units or supplies.

(3) Those responsible for the control of administrative support operations must be kept informed of the status of the division's administrative support resources.

c. Plans and Orders. The administrative plan, the administrative order, and standing operating procedures are the basis for administrative support operations in the division. One administrative order will usually suffice for one tactical operation. Changes to the administrative order and detailed instructions covering hour-to-hour operations are issued as fragmentary orders.

d. Establishment of Priorities. Priorities for providing administrative support are established in accordance with the tactical plan and the condition of supported units. Priorities may be established for any form of administrative support. Their purpose is to insure successful accomplishment of the essential tactical tasks comprising the division mission.

e. Location and Movement of Facilities. Administrative support facilities are located to facilitate the accomplishment of their mission, provide protective dispersion, and provide for their defense. They are moved as often as necessary to keep pace with changes in the tactical situation and the dispositions of the division. To the extent feasible, administrative support units are disposed so that each function can be carried on in more than one location.

Section III. LOGISTICAL SUPPORT

107. Supply

a. General.

(1) The division employs both unit distribution and supply point distribution in the movement of supplies from source to user. When both methods are feasible, unit distribution is generally the preferred method. Whenever possible, supplies delivered to the division technical services by the field army, in field army transportation, are delivered further to the using units on the same transportation without transshipment.

(2) In moving situations, the division carriers with it only the supplies needed for immediate consumption, i.e., a sufficient quantity to sustain operations until resupply can be accomplished. This may include a small reserve as insurance against interruptions in resupply. In static situations, sufficient supplies for several days' consumption may be stocked in the division area in order to free transportation for other purposes during the period.

(3) The division staff compiles and maintains experience data concerning the consumption of supplies. These data assist the staff in anticipating future requirements and in planning the support of future operations.

b. Class I.

(1) *Requisitioning.* Units of the division forward their requirements to the division quartermaster, who consolidates them and forwards them to the army supply point supporting the division.

(2) *Distribution.* The army supply point supporting the division delivers the supplies to the division distributing point. When the situation permits, the supplies may be further delivered to using units without transshipment. Otherwise, they are off-loaded, broken down into unit

lots by the division class I section, and delivered to the using units on transportation furnished by the division transportation battalion. When unit distribution is not feasible within the division, the division quartermaster establishes a schedule for the issue of class I supplies from the division distributing point.

(3) *Reserves.* Units of the division normally carry one ration with their kitchens. The division quartermaster company may carry one additional reserve ration in trailers furnished by the transportation battalion.

(4) *Facilities.* The division quartermaster company operates one or more class I distributing points. These are located on an MSR, and near the center of mass of the division. Trailers carrying the division reserve are parked in the vicinity of distributing points.

c. *Class II.*

(1) *Requisitioning.* Units of the division forward requirements to the division technical service, who in turn consolidate these requirements and forward them to the appropriate supply points and depots supporting the division.

(2) *Distribution.* Chemical, engineer, medical, ordnance, and signal items may be hauled from supply points and depots to division distributing points in field army transportation or in division transportation; the emphasis is on unit distribution by field army. Quartermaster items and ordnance major items are delivered to the division by the unit distribution system. Within the division, class II supplies are normally delivered to the using unit by unit distribution.

(3) *Reserves.* The division does not ordinarily carry a large reserve of class II supplies. However, it normally carries a small stock of fast moving signal, ordnance, medical, quartermaster, and engineer items.

(4) *Facilities.* Facilities for the resupply of class II items consist of temporary holding and breakdown areas. These distributing points are generally very small activities located in or near the headquarters of the technical service unit involved. Chemical Corps items are normally distributed by a chemical combat support platoon attached to the division; when no such platoon is attached, these items are distributed through the division quartermaster company.

d. Class III.

(1) *Requisitioning.* Each unit of the division submits a daily status report to the division quartermaster, informing him of the quantity on hand and the estimated requirement for the ensuing 24-hour period. The division quartermaster makes a similar report to the army supply point supporting the division.

(2) *Distribution.*

(*a*) Supply point distribution is normally employed in effecting supply of class III petroleum products to the division, however, field army QM unit may transport bulk POL to the division distribution point and there transfer it to collapsible tanks or division tank trucks. When supply point distribution is used, the division will haul its gasoline from the army supply point to the division distributing point, using the 5,000 gallon tank trucks provided in the quartermaster company. When expedient, the company may exchange empty 5,000 gallon semitrailers for full semitrailers at the army supply point provided the necessary coordination is accomplished to insure the continuance of prescribed maintenance standards. The exchange principle will also be followed to the extent practicable in effecting unit distribution of class III within the division. Within the division, unit distribution is the normal procedure. The 1,200 gallon tank trucks and the general purpose vehicles equipped with conversion kits in the quartermaster company are used for this purpose. When elements of the division are operating on independent or semi-independent missions, 1,200 gallon tank trucks and the general purpose vehicles equipped with conversion kits may be attached to them; in this case, supply point distribution is used. Individual vehicles moving to the rear on other tasks habitually replenish their fuel at division mobile filling stations or army supply points, before returning to their units.

(*b*) The quartermaster company delivers aviation gasoline to the division base airfield and to such other sites in the division zone as may be required. When required, the class III section in the quartermaster company may employ collapsible fuel tanks to establish temporary storage sites at division airfields.

(3) *Reserves.* The division maintains a mobile reserve of class III by replenishing the loads of its 5,000 gallon and

1,200 gallon tankers as rapidly as they are exhausted. A portion of the total division reserve is stored in collapsible fuel tanks in temporary storage sites normally located in the vicinity of the division distributing point.

(4) *Facilities.* The division quartermaster operates 2 or more distributing points at which 1,200 gallon trucks and individual vehicles are refilled from 5,000 gallon semitrailers or collapsible fuel tanks. 1,200 gallon trucks not operating in close support of units may be held at these distributing points, or may circulate in the division area as mobile filling stations.

e. Class IV. Class IV resupply is accomplished in generally the same manner as class II. Engineer fortifications materials are normally delivered by the army supply points supporting the division and are carried as far forward as possible without transshipment.

f. Class V (Nonnuclear).

(1) *Requisitioning.* Requisitions (transportation orders) from using units are presented at the division ammunition office (DAO) for authentication, normally by ammunition resupply convoys enroute to the ammunition supply point. The basis for approval of requisitions is replacement of expenditure from the basic load. The DAO maintains records of the ammunition requisitioned by each unit and controls the issue of regulated items. All ammunition requisitions (transportation orders) must be validated by the DAO before they are presented at an army supply point or a division distributing point.

(2) *Distribution.* Ammunition is normally resupplied through supply point distribution. The ammunition vehicles of the using units return to the field army ammunition supply point to replenish the basic load of the unit. The division may carry small stocks of selected ammunition items in mobile distributing points in the division trains area, under control of the division ordnance and chemical officers. The composition of these stocks will depend on the nature of tactical operations and the availability of transportation.

(3) *Reserves.* The division does not carry a reserve of class V. In certain types of combat operations, such as the defense or an extensive artillery preparation preceding an attack, units may be authorized to place ammunition on position for future use, so that the unit can begin

a subsequent phase of the operation with its basic load intact.

g. Supply of Nuclear Weapons. Nuclear weapons supply procedures are described in FM 101–31 and in FM 9–5.

h. Water. The division engineer battalion is capable of operating five water points. It is desirable that not more than four water points be operated at any one time to facilitate displacement and maintenance of the equipment. Water points are established in the most convenient locations available. Using units draw water from the nearest water point, using unit transportation.

i. Maps. The division engineer draws maps for the division from the corps engineer and distributes them to using units under the staff supervision of G2. Quantities are based on army tables of map allowances.

108. Transportation

a. General. Employment of the task vehicles in the division transportation battalion is normally centrally controlled. To the extent practicable, every transportation sortie is made to serve two purposes. For example, trucks which haul supplies forward to the battle groups are used to evacuate salvage, prisoners of war, and the dead.

b. Transportation Means.

(1) *Trucks.* The trucks and trailers of the transportation battalion perform most of the division administrative transportation tasks. Division transportation must be augmented to move the division by motor in a single lift.

(2) *Armored carriers.* The armored carriers of the transportation battalion may be used on administrative support tasks in areas exposed to observed fires, or when an amphibious capability is required, or when the available transport of other types is insufficient for the performance of essential administrative support tasks.

(3) *Army aviation.* Army transport aviation is generally the fastest, most flexible, and most versatile means of transportation available to the division. It is employed on appropriate administrative support tasks according to priorities established by the division commander. When the means available are limited to organic division aviation, its use is generally confined to those tasks to which it is uniquely suited, such as resupply of isolated units and rapid distribution of critically needed supplies. Attachment of, or support by, nondivisional transport avia-

tion units broadens the scope of combat operations which can be supported administratively.

(4) *Troop carrier (USAF).* When circumstances warrant, all or a portion of the division may be supplied for extended periods by troop carrier airlift. While this transportation is rarely controlled by the division, it lessens the requirements placed on division transportation and thus has a direct bearing on the employment of division transportation.

(5) *Other means.* The division may employ water, rail, pack animal, or human bearer transportation. The employment of these means is integrated with the employment of other transportation in such a way as to take advantage of the characteristics peculiar to each.

c. *Allocation and Control.*

(1) Transportation employed in administrative support is normally retained under division control. In a fast moving situation, or when a combat unit is operating on a semi-independent mission, transportation elements may be attached to lower echelons.

(2) The use of transportation for administrative support is controlled in the DLCC. In fast-moving or abnormally complex situations, this control may be quite detailed. In other situations, the control required may be limited to the establishment of priorities and delivery schedules and the assignment of recurring tasks or mission type orders. Control of truck operations remains in the transportation battalion. The headquarters and headquarters company of this battalion and the headquarters of the truck transport company are usually located centrally with respect to the principal user.

(3) Efficient use of the existing road net generally requires some degree of traffic regulation. The more limited the road net, the greater is the degree of regulation required. The principal instrument used for regulating traffic is the division traffic circulation plan. Large convoy movements are regulated by division traffic headquarters. The traffic circulation plan and convoy movement plans in the division area are enforced by traffic control posts and mounted patrols furnished by the military police detachment. Traffic control posts are established at critical intersections and at points where principal roads enter the division rear area.

(4) Air movement control necessary to prevent interference between administrative support operations and combat operations is coordinated by the DLCC, the air traffic control element, and the FSCC.

109. Maintenance

a. General. The division performs the first and second echelon maintenance and most of the third echelon maintenance required to keep its equipment operative. When necessary, it receives additional third echelon maintenance support from field army units. When practical, repairs should be made "on site." When equipment must be taken to direct support shops, it should be repaired and returned to the using unit as soon as possible. If such repairs do not fall within the prescribed maintenance level (see Appendix V, FM 9–3 for Ordnance equipment) the items are evacuated by Division Ordnance, who makes arrangements to provide the using unit with replacements.

b. Aircraft Maintenance. Third-echelon aircraft maintenance is performed by the transportation aircraft maintenance detachment of the division which is normally attached to the division aviation company. It is normally performed at one or more airfields in the division trains area.

c. Chemical Maintenance. A platoon from the corps chemical combat support company is usually attached to the division and provides third-echelon maintenance support. When this platoon is not attached to the division, chemical items requiring third-echelon maintenance are evacuated through maintenance channels to the chemical maintenance company in the army service area. Items essential to current operations are replaced from maintenance float stocks. Other items are repaired and returned to the using unit.

d. Engineer Maintenance. The engineer battalion provides third-echelon maintenance support for all engineer equipment in the division. Repairs are performed on site by mobile contact teams whenever possible. The accumulation of unserviceable equipment turned in for repair is not permitted to interfere with the mobility of the battalion. Items which cannot be readily repaired at the using unit are evacuated to the supporting field maintenance company.

e. Medical Maintenance. Items requiring third-echelon maintenance are exchanged for serviceable items at the supply point or depot supporting the division. The division has no third-echelon medical maintenance capability.

f. Ordnance Maintenance.

(1) A direct support section of the forward support company of the ordnance battalion operates in close support of each battle group. This section provides third-echelon maintenance and direct exchange supply support to the battle group and to other units in its vicinity. The remaining direct support section provides similar service to the armor battalion, cavalry squadron, or other units of the division as required by the situation. The headquarters of the company provides backup support to the section.

(2) The main support company provides third-echelon maintenance and direct exchange supply support to units in the division service area. It also provides reinforcing third-echelon maintenance support and supply support to the forward support company.

g. Quartermaster Maintenance. The class II and IV section of the supply platoon has a limited capability for repairing office machines and general equipment. Equipment requiring maintenance beyond the capabilities of this section may be repaired or exchanged by mobile contact repair elements of a quartermaster direct support unit, or by evacuation to supporting field army maintenance installations.

h. Signal Maintenance.

(1) Signal maintenance for the division is provided by the headquarters and headquarters company and the forward communications company of the division signal battalion.

(2) Each of the five battle group area support platoons of the forward communications company includes a mobile forward repair section. These sections provide organizational and field maintenance of signal equipment for the platoons and limited signal field maintenance for the battle groups and other units located in the division forward area. Each forward repair section is capable of repairing radio, radar, and wire communication equipment.

(3) Mobile repair teams of the signal supply and maintenance section of headquarters and headquarters company provide supplemental organizational maintenance for the signal battalion, backup maintenance support for the forward repair sections, and signal field maintenance for all other division units.

(4) Maintenance support is normally provided *on call* in the

area of the supported unit and, so far as possible, is accomplished by on-site repair or by direct exchange of defective subassemblies or entire end items. Maintenance is accomplished by turn-in, repair, and return to user only when other methods cannot be used.

(5) Defective equipment acquired by mobile repair teams through direct exchange is repaired locally, if possible, for reissue. Equipment which cannot be readily repaired is evacuated to the signal supply and maintenance section or to supporting field army maintenance units.

(6) Repair parts are normally issued through maintenance channels. Mobile repair teams carry limited stocks of repair parts for issue to units for organizational maintenance. End items are issued through supply channels rather than through maintenance channels.

i. Cannibalization. Divisional and supporting maintenance units will perform cannibalization in accordance with AR 750–5. This procedure, where appropriate, provides a source of repair parts.

110. Medical Evacuation and Hospitalization

a. Concept. Patients are hospitalized in the division area only when they cannot be evacuated or returned to duty. The treatment given by division medical service is designed to return the soldier to duty immediately or to prepare him for further evacuation to the rear. Evacuation of patients is normally accomplished by medical units to the rear evacuating patients from forward areas.

b. Division Treatment Facilities.

(1) *Clearing stations.* The clearing company establishes one or more clearing stations accessible to evacuation routes and helicopter landing sites. The number of stations to be established is based on the tactical and logistical situations, troop concentrations, terrain, climate, and rear area security and area damage control plans. Each station becomes a base of medical operations for its assigned geographical area of responsibility. Clearing stations perform triage, provide medical and surgical care to the extent necessary to return the patient to duty within the evacuation policy, or prepare him for evacuation. They receive patients from divisional, nondivisional and transient units within their assigned areas. During displacements continuous medical service is maintained by movement of the clearing platoons in sections, leap-

frogging of platoons, or mutual support by clearing platoons when feasible. Movement is closely coordinated with supported units.

(2) *Field army support.* During periods of heavy combat, a mobile army surgical hospital may be established in the vicinity of a designated division clearing station to provide emergency and resuscitative surgical care and treatment for nontransportable patients.

c. *Evacuation of Patients.*

(1) The ambulance company evacuates patients of the infantry division. At full strength the unit has the capability of evacuating patients from the infantry battle group aid stations and assisting in the evacuation of patients from the aid stations of the artillery, cavalry squadron armor, engineer battalions, and other medical treatment facilities established by the division medical service. Because of the close relationship between evacuation and clearing functions, ambulance platoons are normally assigned areas of responsibility identical to those of the clearing platoon to which they evacuate. The platoon is employed on an area basis under the platoon commander. In employment, the sections or individual ambulances are located in such manner as to expedite the transport of patients from unit areas or aid stations to the clearing stations. Maximum use is made of radio communications in control and dispatch of ambulances. Increasing area evacuation requirements may be met by the temporary attachment of personnel and equipment between ambulance platoons, or if the requirements are beyond the capability of the ambulance company, assistance is requested from higher headquarters. The company is normally assisted in its evacuation mission by air ambulance units. During peakloads, division aviation may be used to reinforce air ambulance units supporting the division.

(2) Patients in division clearing stations are normally evacuated by supporting field army elements, using both ground and air transportation. This evacuation is arranged for and coordinated by the division surgeon or his representative in the DLCC.

111. Battlefield Recovery, Evacuation, and Salvage

a. Recovery and Evacuation. Commanders at all echelons are responsible within their capabilities, for the prompt recovery and

evacuation of damaged equipment and its repair and return to service. Normally, tactical units are responsible for battlefield recovery; evacuation is performed either by service elements of the division or by supporting army service units. When recovery requirements exceed unit capabilities, assistance is requested from the appropriate division service unit. Requests for assistance that are beyond the capabilities of divisional technical services are forwarded to the next higher echelon for necessary action. Damaged vehicles are moved by the using unit to the MSR. They are then evacuated by division ordnance elements to the division ordnance collecting point.

b. Salvage.

(1) *Definition.* See AR 320–5.

(2) *Responsibility.* All units are responsible for internal salvage operations, and all individuals are trained in proper salvage discipline.

(3) *Evacuation.* The division quartermaster operates a division salvage collecting point, usually located near a class I distributing point. Other technical service units assist in the operation of the salvage collecting point as required. Salvage is evacuated from unit areas to the division collecting point by any means appropriate to the situation.

112. Bath and Clothing Exchange Service

The division quartermaster provides bath service to troops of the division employing organic shower bath units. The bath section of the QM Company can serve troop units in nine separate locations as determined by need and troop density. When arrangements can be made for additional operating personnel and clothing stocks, the division quartermaster may establish a clothing exchange service at the bath points.

113. Construction

Construction in the division area is normally limited to the construction and maintenance of routes and airfields. The division engineer battalion performs this work. Normally, corps or army engineers will assist the division engineers in road maintenance by extending their work forward into the division service area.

114. Labor

In emergencies, labor can be provided by operating personnel of the division trains command post. Labor may also be hired from

the civilian populace in some situations. See FM 101–5 for additional information concerning procurement of labor.

Section IV. PERSONNEL SUPPORT

115. Maintenance of Strength

a. Requisitions. Units of the division, including attached units, forward personnel requisitions to the division adjutant general as necessary. Requisitions not filled from within the division are consolidated and forwarded to field army; an information copy is furnished to corps. Requisitions originating in attached units are forwarded separately.

b. Receipt and Processing of Individual Replacements.

(1) Replacements normally travel to the division replacement section in trucks furnished by the division transportation battalion. They may, however, be moved by air or ground transportation supplied by field army. In either case, they should be escorted by representatives of the division replacement section.

(2) The division replacement section is established in the vicinity of the rear echelon of division headquarters. It operates under the control and supervision of the adjutant general. It is supported administratively by the division administration company. Its location should be somewhat removed from other activities of the rear echelon and division trains which might interfere with the processing and indoctrination of the new men. It should have easy access to a suitable training area. The section is so organized that replacements are not placed in close or frequent association with hospital returnees, leave personnel, and other individuals passing through the replacement section.

(3) A prolonged stay by individuals in the replacement system tends to be destructive of morale and efficiency. Replacements should be retained in the replacement section for the shortest practicable time. This ordinarily should not exceed 3 days. While in the replacement section they should, in addition to being classified and assigned, receive training and indoctrination in the history, traditions, mission, and current situation of the division, and in individual combat skills appropriate to current operations.

(4) Replacements are assigned to units of the division on

the basis of existing needs and the tactical situation. They are moved to their units under unit escort in transportation furnished by the division transportation battalion.

c. Receipt and Processing of Unit Replacements. Unit replacements are processed by the replacement section of the administration company, but retain unit integrity. They may require very limited processing. Units smaller than company size are provided administrative support by the administration company. Unit replacements are assigned on the basis of tactical considerations.

d. Personnel Daily Summary. The division commander, the staff, and higher headquarters are kept informed of currently effective strengths by means of the personnel daily summary.

e. Casualty and Loss Reports. The division adjutant general establishes procedures for timely and accurate casualty and loss reporting. Immediately following enemy nuclear or chemical attack on unit, the senior member of each unit of the control and assessment team (CAT) commander will estimate number and type of casualties, effective strength of affected units, and loss of commanders, if applicable, and submit report through command channels by most rapid means available.

116. Morale and Personal Services

a. Army and Air Force Exchange Service. The division quartermaster operates the Army Exchange functions within the division. Army Exchange supplies are normally distributed by the division quartermaster company. Gratuitous issue items are normally distributed with class I supplies.

b. Postal Service. The adjutant general normally establishes the division Army Post Office (main) in the vicinity of a class I or III distributing point to facilitate pick up of mail by divisional units. APO units are also established in the forward troop areas and in the vicinity of the division rear echelon to facilitate mail service and the provision of postal financial services for all units of the division.

c. Awards and Decorations. Procedures are established for prompt award and presentation of decorations in recognition of heroic acts. The division program is based on the program of higher commanders.

d. Legal Assistance. The division staff judge advocate and his section, located at the rear echelon, provide legal advice and assistance in the preparation of wills, powers of attorney, and other legal instruments to individuals of the command.

e. Financial Service. The division finance section disburses money to agent officers for the payment of troops and civilian labor. It is located with the rear echelon.

f. Leaves, Passes and Rotation. Procedures are established for rest and relaxation in order to maintain and refit men for combat and other military duties. A rotation plan is established to conserve manpower and increase combat efficiency.

g. Special Services. The division adjutant general's section operates the division recreation program. The extent of the program is governed by the combat activities of the division. During prolonged periods of combat, a division rest camp is established. The purpose of the rest camp is to provide an atmosphere in which individuals can recover from the effects of mild battle fatigue. Equipment for the camp is normally furnished as class IV supply. Administrative support is provided by the administration company. The camp is located well to the rear in the division rear area and removed from other major activity.

h. Division Band. The primary function of the band is to act as a musical organization in both peacetime and war. The division adjutant general exercises operational control of the band when performing its primary mission. Circumstances may necessitate the temporary employment of bandsmen in a minor nonmusical role. They should be relieved of such duties as early as possible so as not to impair their technical proficiency by nonuse of musical skills.

117. Headquarters Management

This is the personnel function concerned with movement, internal arrangement, organization, and operation of the various echelons of the headquarters. For this function, the G1 is assisted by the Headquarters Commandant, the AG, and other special staff officers. Details of policy and doctrine are covered in FM 101–1 and FM 101–5.

118. Personnel Procedures

This is the personnel function that covers: classification, assignment, promotion, transfer, reclassification, demotion, elimination, retirement, separation, rotation, and related activities. The adjutant general, operating under the general staff supervision of the G1, is primarily responsible for these functions. These functions are generally executed by three coordinated echelons: company clerks, unit personnel sections; and division AG sections. Details of policy and doctrine are covered in FM 101–1 and FM 101–5.

119. Graves Registration

a. Concept. The dead are normally evacuated from the division area for interment. Isolated burials in the division area are resorted to only as an emergency measure.

b. Collection and Evacuation.

(1) When in combat, the division is augmented with a graves registration platoon, attached to the quartermaster company. Six collecting and evacuation sections of this platoon assist combat units in the collection and evacuation of the dead. The division collection, identification, and evacuation section operates the division graves registration collecting point.

(2) The graves registration collecting point is located a short distance from the MSR, near the quartermaster company. It should be isolated from the view of other activities.

(3) The dead are identified as early and as fully as possible. They are normally evacuated with their effects from forward areas in transportation returning from other tasks. In nuclear situations, special graves registration task groups may be formed, including sufficient transportation to evacuate the dead promptly.

c. Isolated Burials. When isolated burials are resorted to, they are fully documented and reported promptly through graves registration channels. Details of graves registration service are covered in FM 10–63, FM 101–1 and FM 101–5.

120. Discipline, Law, and Order Within the Command

a. Responsibility. Each subordinate commander is responsible for the discipline of his unit and the enforcement of law and order in his area of responsibility. Division military police are employed to enforce law and order in areas not assigned to a subordinate commander, and to support subordinate commanders as required.

b. Straggler Control.

(1) The area in which straggler control is established extends from the rear of units in contact to the division rear boundary. Straggler posts established by military police are located at critical points on the main roads within the division area and serve a dual function of traffic control and straggler control. Straggler control posts are augmented by roving, motorized military police patrols which similarly have a dual function of traffic control and straggler control.

(2) In static or nonnuclear situations, straggler posts may be

established in the division rear area along lateral roads at the points where they are crossed by natural lines of drift.

(3) The military police detachment operates a straggler collecting point at a central location in the division area. As stragglers are collected at the straggler collecting point, they are sorted for return to their units, evacuation to a medical facility, or other disposition as may be appropriate.

(4) Each subordinate commander is responsible for straggler control within his own area. Commanders of units located in the division rear area assist in the control of stragglers who appear in their areas of responsibility.

c. Confinement Facilities. Convicted military prisoners are not normally confined in the division area. The military police detachment may operate a small confinement facility for the temporary custody of persons awaiting trial and convicted prisoners awaiting evacuation.

121. Prisoners of War

a. Collection. The military police detachment operates the division prisoner of war collecting point. This facility is centrally located and conveniently accessible from an MSR and the division main command post. All prisoners of war taken in the division area are processed through this facility except wounded POW as indicated in *b* below; for possible interrogation and for further evacuation to the rear. (See FM 30–9.)

b. Evacuation. Evacuation of prisoners of war is a military police responsibility. Large scale evacuation of prisoners of war may require augmentation or attachment of additional military police from corps or army military police units. Wounded prisoners of war are evacuated through medical channels; their security is provided for by lightly wounded evacuees of the division. Army military police evacuate the division collecting point as arranged for by the division provost marshal. Division military police may be attached to a combat unit operating semi-independently to serve as a nucleus for the prisoner of war collection and evacuation activities of the force.

Section V. CIVIL AFFAIRS

122. Purpose

During combat, the primary purpose of division civil affairs activities is to prevent civilian interference with division opera-

tions and secure such civilian assistance as may be appropriate. The division's civil affairs operations are designed to further the civil affairs objectives of higher echelons and to facilitate the future conduct of civil affairs activities in the locality. When not in combat, the division may be assigned civil affairs missions which greatly increase the relative importance of its civil affairs operations. (See FM in the 41 series.)

123. Means Available

a. Organizations. Two civil affairs elements will normally be available to divisions. A civil affairs (G5) section augments the division general staff and a CA command support platoon is normally attached to the division. This platoon normally consists of a platoon headquarters and a language team. It is normally employed under division control. Additional civil affairs units and functional specialist teams may be attached temporarily to the division as required by the division's civil affairs situation.

b. Supplies and Equipment. Supplies and equipment required in discharging civil affairs tasks are procured locally when possible. Resources provided for the support of combat operations are diverted to civil affairs activities only when success of the combat mission requires such action.

124. Activities During Combat

a. Control of Civilians. The division controls the civilian population in its area to the extent required to clear tactical areas, prevent congestion of roads, and maintain security. Measures taken may include the complete evacuation of forward areas, restriction of civilian movement in certain areas and to certain roads, and selective evacuation of suspected hostiles. A civilian collecting point may be established in a remote part of the division rear area to facilitate the evacuation or control of civilians. The collecting point is operated by the civil affairs command support platoon.

b. Civilian Assistance. Support for the combat mission of the division may be secured from the local population in the form of intelligence, counterintelligence, antiguerrilla operations, labor, other services, and supplies.

Section VI. REAR AREA SECURITY AND AREA DAMAGE CONTROL

125. Rear Area Security

a. Direction. The division trains commander plans and directs

the measures necessary to secure the division rear area against hostile infiltrators, guerrillas, and airborne or air-landed raids.

b. Forces. Every unit in the division rear area, with the exception of medical units, provides its own local security. Whenever required, the trains commander is provided a highly mobile combat force, such as a portion of the cavalry squadron, with which to maintain surveillance over and counter hostile threats throughout the area. Rear area security is normally assigned as a contingency mission to elements of the division reserve. When the hostile threat warrants, the division commander provides additional tactical and tactical support elements to the trains commander for this purpose.

c. Measures. Measures employed in rear area security include—

(1) Deployment of administrative support units with due regard to defensibility and mutual support.
(2) Coordination of the local security plans of adjacent units.
(3) Employment of a mobile reserve to destroy hostile threats.
(4) Aerial and ground surveillance of the division rear area.
(5) Employment of an alert system for rapid communication of information concerning hostile threats.
(6) Use of armed convoys.
(7) Posting of security detachments at critical defiles in the road net.
(8) Securing the assistance of civil agencies and the civilian population as a whole in the detection and control of guerrillas, to include denial of material assistance.
(9) Route reconnaissance and patrol.
(10) Camouflage and light discipline to avoid detection.
(11) Employment of obstacles.
(12) Execution of radiological monitoring and survey when required.

126. Area Damage Control

a. Direction. The division trains commander plans the measures necessary to minimize the effects of massive damage and CVR contamination to the administrative support units and facilities in the division rear area. He also directs and supervises damage control activities when execution of the plan becomes necessary.

b. Means. The principal means available to the division trains commander for area damage control are the personnel and equipment of administrative support units. Locally procured resources

and assistance from civilian agencies or nondivisional units may be available in some situations.

c. Measures. Damage control measures include—

(1) Standing operating procedures and implementing instructions for self help within each administrative support unit.

(2) Establishmnet of coordinated division area damage control SOP and issuance of implementing instructions as required.

(3) Designation, training, and employment, as required, of fire fighting, damage clearance, decontamination, rescue, food service, medical, and repair teams in the various administrative support units. Each unit is instructed to prepare teams appropriate to the skills and equipment peculiar to its primary functions.

(4) Prompt restoration of control and assessment of damage following a nuclear or CBR attack. Control and assessment teams (CAT) are formed in the division trains headquarters and at least one other designated unit of division trains.

(5) Rerouting of traffic, as required, to provide continuous support to tactical elements and facilitate the reduction of damage and contamination.

(6) Emergency reallocation of administrative support tasks to insure the continuation of support with the least possible interruption.

(7) Organization and location of facilities to avoid or minimize damage and contamination.

CHAPTER 6
OFFENSE

Section I. GENERAL

127. Purpose

In the offense the infantry division closes with and destroys the enemy, and seizes and controls terrain using fire and maneuver.

128. Characteristics of Offensive Operations

a. Nuclear Warfare. The attack is characterized by the use of nuclear and chemical fires, swift maneuver, violent assault, and rapid and relentless exploitation. However, nuclear firepower may have a decided limiting impact on maneuver as a result of its obstacle production and troop safety requirements. Speed in capitalizing on the effects of firepower is essential. Units protect themselves against enemy nuclear fires by dispersion, digging in, and speed of movement. Movement is rapid and continuous without congestion or unwarranted massing. The attacker gains surprise and preserves secrecy by using concealment and tactical cover and deception. Upon seizure of objectives, minimum forces consolidate gains, while other forces rapidly disperse or exploit. Attacking units may locate enemy forces, form them into suitable targets, hold them until nuclear or chemical fires can be brought to bear, and then destroy the remnants. Enemy forces may also be led or deceived into entering a fire sack; this procedure may be particularly desirable when the enemy has superior forces.

b. Nonnuclear Warfare. The characteristics of the attack in nonnuclear warfare are similar to those of nuclear warfare except that combat power may be reduced. However, sufficient combat power can be generated by nonnuclear means in specific localities to make possible as rapid an operation as exists in nuclear warfare. Chemical fires can be used to insure a preponderance of combat power. The fact that an enemy with a nuclear capability has not used it during a particular operation does not eliminate the possibility that he may use it at any time. Concentration of troops and materiel is always a calculated risk.

129. Fundamentals of Offensive Action

a. Offensive action requires the concentration of superior combat power at the decisive point and time.

b. Fire superiority must be gained early and maintained throughout the attack to permit freedom of maneuver without prohibitive loss. The effects of fire, including nuclear fires, must normally be exploited by maneuver.

c. The attacker maneuvers to create opportunities to increase the effect of his fire, to avoid terrain organized by the enemy for defense, and to force the enemy to fight on terrain advantageous to the attacker. By maneuver the attacker closes with and destroys the enemy by assault or compresses or lures the enemy into a target for destruction by fire.

d. Plans must provide for exploitation of advantages accruing during the attack. This requires a reserve of troops and nuclear weapons which provides the commander means to exploit successes. Failure to capitalize on such opportunities may result in slow, plodding attacks in which the attacker invariably will suffer heavy losses. When the opportunity for decisive action presents itself, the commander unhesitatingly commits his total resources and demands the ultimate from his troops. Relentless pressure applied day and night against a weakening enemy denies the hostile force respite from battle, the opportunity to recoup losses, or to gain the initiative.

e. Terrain has a decisive influence on offensive combat. Plans are directed toward the early seizure of key terrain features which give an advantage of observation, cover and concealment, and fields of fire; which facilitate maneuver and support; which control routes required by friendly and enemy forces; or which afford additional security. Terrain is important only so far as it provides advantages which can be exploited to destroy the enemy force.

f. In the attack there are three principal tasks—locating and holding the enemy in position, maneuvering against him to gain an advantage, and at the decisive time, delivering an overwhelming attack which destroys him. The tasks usually are accomplished by the three principal tactical groupings—the main attack, the secondary attack(s), and the reserve. The size of the tactical groupings is influenced by the availability of nuclear fires. Under some conditions, nuclear firepower may reduce the requirement for secondary attack forces.

g. Surprise is always sought. It may be gained by choosing an unexpected time, place, direction, type, or strength of attack. It is further enhanced by deception.

h. An aggressive attack inherently provides some security.

i. The commander insures that the attacks of his subordinate units are coordinated and contribute to the accomplishment of the command's mission by assigning missions or objectives, designating direction and time of attack, and allocating means.

130. Forms of Maneuver

a. General. Attacks are categorized principally as envelopments (including turning movements) and penetrations. Offensive action is the blending of these forms together with reconnaissance and exploitation. The specific maneuver depends largely upon the level of command; for instance, the division itself may be enveloping, but one of its battle groups may be penetrating.

b. Envelopment. In the envelopment the attacking force avoids the enemy's main defensive strength by going around or over it to seize an objective in his rear which cuts his escape routes and subjects him to destruction in position. In the turning movement, a variation of the envelopment, the attacking force passes around or over the enemy's main force to seize an objective deep in the enemy's rear which will cause him to abandon his position or to divert major forces to meet the threat of the turning force and thus fight on the ground chosen by the attacker (pars. 175–180).

c. Penetration. In the penetration the attacking force ruptures the enemy's defensive position and seizes objectives which break the continuity of his defense thus facilitating the destruction in detail of his divided force (pars. 171–174).

131. Choice of Maneuver

The directive of the higher commander, the characteristics of the area of operations, and the situation of the opposing forces determine the form of maneuver which is adopted by the division. The higher commander seldom dictates the form of maneuver. The mission assigned the division and the tasks, including implied and deduced tasks derived from it, may impose limitations on time, direction, and secrecy which influence the choice. Normally terrain and the opposing situations are the principal factors in choosing the form of maneuver to accomplish the mission.

Section II. BASIC CONSIDERATIONS OF OFFENSE

132. Objective

The objective is the goal toward which the effort of the command is directed. At division and lower levels, it is usually a

terrain feature or a locality, but it may be the destruction of an enemy force. Objectives are stated in the mission assigned to a force. Additional tasks may be derived from the stated mission as implied or deduced tasks. The objectives assigned subordinate elements of the division contribute directly to the accomplishment of division's mission and are selected to contribute to unity of effort. Therefore, subordinate commanders must be fully informed as to the purpose of their attacks and objectives.

133. Terrain and Weather

a. Observation. Aerial observers and surveillance equipment may reduce the importance of high ground for observation. Line of sight ground surveillance equipment, however, relies largely on high ground for maximum effectiveness. When weather or other conditions prevent the use of aerial observers and ground or aerial surveillance equipment, alternate means, normally observation posts, listening posts, and patrols, must supply essential information.

b. Obstacles.

(1) Nuclear fires may produce obstacles by induced radiation, fallout, fires, or blowdown. Close coordination between nuclear fires and maneuver is esential to minimize the impact of these undesirable effects on maneuver. An otherwise acceptable scheme of maneuver may have to be greatly changed if nuclear fires are used, or nonnuclear fires may have to be substituted to retain the scheme of maneuver. Engineer support and additional means of mobility may be required to overcome these effects.

(2) Small enemy forces determinedly defending obstacles can seriously delay or cause attacking forces to mass. This may require the use of nuclear fires to destroy forces which might otherwise not be considered remunerative targets. Armored vehicles, trucks, and aircraft are used to cross or bypass obstacles with maximum speed.

c. Cover and Concealment.

(1) Skillful use of cover and concealment in the offense contributes materially to the achievement of surprise and reduces losses to enemy fire.

(2) Concealment impairs the enemy's ability to locate targets; however, wooded or built-up areas and deep valleys or ravines may increase casualties from nuclear weapons' secondary effects or reinforcement of the blast effect. Certain areas offer good concealment as well as good cover from nuclear effects and favor tactical plans

which use these areas. For example, areas containing numerous mine shafts, caves, and tunnel-type fortifications afford good protection from nuclear weapons and also provide concealment.

(3) Areas containing numerous small patches of woods, underbrush, or small villages and towns may provide good concealment for a division organized into small task forces. Such areas may provide poor concealment for a concentrated division. Similarly areas exist which provide good cover for small forces.

(4) Darkness, fog, snow, dust, smoke, and rain provide concealment. Movement and attack under these conditions, especially that of darkness, must be considered as commonplace as movement and operations during daylight and conditions of good visibility.

d. Fields of Fire. Good fields of fire enhance the effectiveness of weapons of the division. In the attack, the division seeks to avoid enemy positions having good fields of fire. If such defenses cannot be avoided, smoke, supporting fires, and deception reduce their effectiveness.

e. Key Terrain. The commander's plan is directed toward the early seizure or control of key terrain. These are the terrain features which are essential to the accomplishment of the mission in the shortest possible time and to the maintenance of the speed and momentum of the attack. Terrain areas are held as means of controlling the battle to create favorable conditions for maneuver and use of fire.

f. Avenues of Approach.

(1) Possible avenues of approach are analyzed based upon the availability of observation, cover and concealment, fields of fire, and space for dispersion and maneuver; ease of movement considering the mobility of the force, obstacles, cross-country trafficability, road and trail network, and the possible effect of adverse weather and the length and directness of the avenue to the objective. Nuclear warfare increases requirements for dispersion. The possible intensification of effects in valleys and the susceptibility of wooded areas, towns, and defiles to the obstacle producing effects of nuclear weapons must also be considered.

(2) In selecting approach routes for airmobile operations, the major concern is concealment. Routes are selected which provide defilade and are easy to follow. Heavily

forested and swampy areas provide good routes as ground troops have little opportunity to see or fire at low-flying helicopters. Ridges are avoided, when possible, to reduce the possibility of detection by radar. Steep defiles or canyons are avoided because of the possible effects of downdrafts on control of aircraft.

(3) Avenues of approach are used which provide for rapid movement to objectives and the space necessary for dispersion. Frequently the best avenue of approach is used by the main attack. However, enemy defenses and capabilities along the better avenues of approach or the possibility of increasing surprise by the use of other less desirable avenues warrant careful consideration in the selection of an avenue of approach to be used by the attacking force. Fires may be used to neutralize forces occupying terrain which dominates an avenue of approach.

g. Weather.

(1) Weather conditions affect trafficability, visibility, stamina of troops, and nuclear weapons effects.

(2) Attacks in adverse weather enhance surprise and produce decisive results with fewer casualties. Exposure to the elements may, however, produce serious personnel conservation problems.

134. The Enemy

The enemy situation is carefully studied to determine strengths, dispositions, capabilities, and tactics. His weakness is exploited and his strength avoided. Knowledge of the enemy's dispositions influences the selection of the form of maneuver. Knowledge of the enemy's capabilities and tactics permit a commander to determine more accurately the relative risks involved in a course of action. Friendly operations must be continuously evaluated against the enemy nuclear capability. Operational planning considers the impact of enemy use of nuclear weapons and provides for contingency action to reduce, to the extent possible, the disruption caused by such enemy attack.

135. The Civilian Population

The assistance or interference by the civilian population may affect the selection of the course of action. In addition the effect on the civilian population must be considered in the light of directives from higher headquarters.

136. Fire Support

a. General. Fire and maneuver complement each other. They can be used together in many combinations to provide flexibility. Fire support planning is concurrent and integrated with maneuver planning. Preparatory fires weaken the enemy physically and psychologically for the assault. Fires in support of the attack add to the maintenance of momentum. Fires cover the reorganization of the force on the objective.

b. Nuclear Fires. Use of nuclear fires may permit adoption of courses of action which would otherwise be infeasible. In support of the main attack they facilitate the rupture of enemy positions with reduced requirements for maneuver units. Nuclear fires may enable the attacking force to exploit from the line of departure. They can be used to reduce requirements for secondary attack forces. Nuclear weapons held in reserve reduce the requirements for troop reserves, yet provide the commander a powerful and flexible means of influencing the action. The versatility and decisiveness of nuclear fires enhance mutual support between widely separated units.

c. Chemical. Nonpersistent toxic chemical attack produces widespread casualties without the destructive effect of nuclear fires. Short duration persistent toxic chemical concentrations can block enemy movement or deny terrain areas to him. Toxic chemicals in conjunction with nuclear fires greatly increase the casualties inflicted upon the enemy and retard his efforts to reorganize his defense.

d. Air. Aircraft have the capability of delivering all types of munitions against enemy forces and positions. Aircraft are particularly suited for the attack of moving targets.

e. Nonnuclear Artillery. Nonnuclear artillery provides close continuous support. It is ideally suited to the neutralization and destruction of enemy units during the movement of attacking forces to assault lines.

137. Mobility

a. Mobility provides the commander flexibility in selecting and shifting the area for application of combat power. Superior mobility increases the tempo of the attack and keeps the enemy off balance. Ground mobility is sensitive to the trafficability of the terrain. Mud and swollen streams impede it; dry or frozen terrain aids it. Airmobile forces can seize objectives in rear of enemy defenses or perform other missions which increase the speed of the attack.

b. Skillful use of the division's available transportation, to-

gether with imaginative improvisation, can greatly enhance the mobility of its foot elements.

138. Coordination and Control

a. General. Success of the attack requires rapid response by the division to the will of the commander. He directs changes in organization for combat during the attack, rapid phasing of forces into the attack, and prompt exploitation of success. Rapid and bold decisions are essential elements in the attack.

b. Leadership. Forceful leadership by all commanders is imperative to obtain maximum results from applied combat power. Separation of units and possible loss of communications place great responsibility on commanders for independent thought and action. Succession of command must not disrupt the attack.

c. Communications. Proper control demands integration of the communications plan with the tactical plan.

d. Orders. Orders must be clear, concise, and complete. They must be issued promptly to permit maximum understanding and dissemination. Each subordinate commander must be fully aware of the division commander's concept and the part his unit plays in the accomplishment of the mission.

e. Unity of Command.

(1) *General.* Unity of command facilitates achieving unity of effort. The tactical control measures discussed in paragraph 158*b* contribute to this. Other methods used in lieu of, or in conjunction with, tactical control measures are discussed below.

(2) *Physical presence of the commander.* The division commander may personally control the efforts of subordinate units with related missions.

(3) *Use of the brigade headquarters.* The brigade headquarters may control the efforts of designated elements of the division.

(4) *Attachment and task forces.* The formation of task forces or the attachment of units provides unity of command.

(5) *Follow and support mission.* Assignment of a unit to follow and support an attacking unit provides unity of effort in that zone. Following and supporting units at the request of the attacking units may mop up, reduce bypassed resistance, protect rear areas, control civilians in the rear, secure key terrain and lines of communications, and execute similar missions which facilitate the rapid advance of the attacking unit.

f. Tactical Control Measures. Tactical control measures are discussed in paragraph 158*b*.

139. Frontages and Depth

a. Frontage. The frontage assigned a unit depends upon the unit's mission, mobility, available fire support, communications, and surveillance equipment; the terrain; and the expected enemy resistance. It provides ample space for dispersion and for the maneuver of subordinate units, yet it is not so extended as to jeopardize control and mutual support. Units seldom fight in uniform distribution along the entire front but rather in small groups taking advantage of the terrain and the enemy situation. Such dispersed operations result in sizable gaps controlled by patrols and fires and kept under observation by surveillance equipment.

b. Depth. Depth is required for continuity of the attack, efficient location of fire support and administrative support means, and dispersion. It is obtained by the use of column or echelon formations. Such formations provide for rapid maneuver by complete tactical units.

140. Distribution of Forces

a. Main Attack. The main attack is directed against the decisive objective. The dicisive objective is that objective which best facilitates accomplishment of the division's mission. The main attack is accorded first priority in the allocation of combat power. It must be provided the means to gain decisive superiority over the enemy and to maintain momentum to the objective. Under some conditions, as in the cases of double envelopments and multiple penetrations, there may be two equally weighted (main) attacks.

b. Secondary Attack(s).

(1) A secondary attack should contribute to the success of the main attack by accomplishing one or more of the following:

(*a*) Seize terrain which facilitates the maneuver of the main attack.

(*b*) Hold the enemy in position.

(*c*) Deceive the enemy as to location of the main attack.

(*d*) Force the enemy to commit reserves prematurely or in an indecisive area.

(*e*) Prevent reinforcement opposite the main attack.

(2) Adequate, though minimum, means are provided for the accomplishment of these tasks. Nuclear weapons may be

used to accomplish tasks which might otherwise require the commitment of large bodies of troops. If there is an abundance of means, especially nuclear weapons, the combat power of secondary attack forces may approximate that of the main attack.

c. Reserves.

(1) *General.* The division retains a reserve to enter combat offensively at a decisive time and place to exploit success and complete the destruction of the enemy. A reserve also provides the commander a means of dealing with unforeseen as well as foreseen contingencies. It adds to security although this is not the principal reason for its retention. The reserve may be used to—

(*a*) Exploit success.

(*b*) Reinforce the main attack.

(*c*) Hold ground seized by attack force.

(*d*) Defeat enemy counterattacks.

(*e*) Provide security.

(2) *Size of reserve.* A deep objective, limited knowledge of the enemy situation, or inability to visualize the attack to its final objective requires the retention of a stronger reserve than in situations where these conditions are known. When attacking an enemy known to be of inferior mobility, the reserve may be smaller than when attacking one of equal or superior mobility.

(3) *Location of the reserve.* Dispersal of the reserve by combined arms teams into multiple assembly areas provides some protection from nuclear attack. Reserves are located—

(*a*) On or near a road net which facilitates rapid movement to points of probable employment. Availability of the reserve for employment is based on time rather than distance from the point of employment.

(*b*) To favor the main attack.

(*c*) To provide security to the command.

(*d*) To provide maximum protection against hostile observation and fire.

(4) *Nuclear weapons.* The commander normally holds a portion of his nuclear weapons in reserve to engage targets of opportunity. Nuclear weapons in reserve reduce the requirement for a large troop reserve without a corresponding reduction in its power and flexibility.

(5) *Reconstituting.* When the reserve is committed, provi-

sions are made for reconstituting a reserve at the earliest practicable opportunity.

141. Employment of Tactical and Tactical Support Units

a. General. The division builds its combat power around its five battle groups, its armor battalion, its cavalry squadron, and any attached infantry, armor, or cavalry units. These units are formed into combined arms teams as required by the mission, terrain, and enemy. The brigade headquarters may control one or more of these teams. Each team usually contains infantry and armor elements supported by engineers, artillery, and such other forces as may be required. Task forces may be formed to accomplish independent mission.

b. Battle Group. The battle group may be used in the main attack, secondary attack, or as part of the reserve. A field artillery howitzer battalion is normally placed in direct support of each committed battle group and an engineer company normally supports it. A battle group may have attached to it one or more tank companies or the armor battalion. Transportation, either truck or armored carriers, is attached when surface transportation is required. If airmobility is desired, aircraft are normally placed in support of the battle group for a prescribed period or on a sortie basis. Rifle companies from one battle group may be attached to another battle group, to the armor battalion, or to the cavalry squadron. On rare occasions companies may operate directly under division or brigade control. If the battle group is to execute an independent mission, normally a task force is developed using the battle group as a nucleus.

c. Armor Battalion. The armor battalion may be used in the main attack or as a part of the reserve. It is seldom used in the secondary attack. It may be attached in part or whole to a battle group making the main attack or in reserve. Tank companies may be attached to a unit making a secondary attack. If required, one or more of its companies may be attached to the cavalry squadron. If employed as a battalion, one or more rifle companies are attached and necessary artillery and engineer support are provided. For independent missions, the battalion may be used as the nucleus of a task force. The mobility and armored firepower of the battalion make it particularly suitable for exploitation.

d. Cavalry Squadron. The squadron is normally used in a reconnaissance and security role. It may be employed as an economy of force unit. If required to seize and control terrain and participate in more than light combat, the squadron normally requires the attachment of rifle and tank elements and suitable artillery and

engineer support. The squadron can be used as the nucleus of a task force.

142. Security

a. The purpose of security in the offense is to preserve secrecy, to avoid unexpected interference by the enemy, to maintain the integrity of the formation, and to gain and maintain freedom of action. The violence and speed of the attack frequently offer the best security by keeping the enemy so heavily involved that has neither the time nor means to endanger success of the attack. The retention of a reserve enhances the security of the command.

b. Widely dispersed attack formations tend to bypass enemy strong points and to expose friendly flanks. Bypassed enemy forces must be controlled or at least kept under surveillance until they are destroyed by following units or fires. Flanks and gaps between units are secured by patrols, flank guards, and echeloned reserves or by surveillance and fire. Administrative and fire support units may require protection from ground attack. These considerations must not slow or divert the momentum of the attack.

c. Early warning of impending enemy countermeasures and the collection of timely and accurate information are essential to security. Highly mobile reconnaissance forces such as the cavalry squadron and aviation company are used extensively in this role. In addition, the reconnaissance and other intelligence capabilities of committed units are exploited for this purpose.

d. The division protects itself from nuclear and chemical attacks by speed of movement; cover and concealment including that offered by darkness; dispersion; deception; and the protection of armored vehicles, protective clothing, and fortifications, including foxholes.

e. Air defense is discussed in paragraphs 68 and 69.

143. Tactical Cover and Deception

a. Tactical cover and deception in the offense mislead the enemy as to the division's dispositions and plans and keep him off balance and unable to act decisively. Tactical cover and deception are considered concurrently with the development of the tactical plan.

b. Active and passive deception measures are practically unlimited. However, means and measures are limited by the time available to develop the deception story, time to inject it into the enemy's intelligence channels, and the timelag required for the enemy to evaluate the information and react to it. These measures must be approved by the next higher headquarters.

c. Secondary attacks, feints, raids, and demonstrations including the use of nuclear fires mislead the enemy as to the location of the main attack. Control of radio communications conceal the time of attack. Disposition of actual equipment and simulation devices mislead the enemy as to the size, type, and intentions of attacking units. Camouflage conceals the existence of units, and decoys draw enemy fires away from actual units.

d. See FM 31–40 for detailed information on tactical cover and deception measures and planning.

144. Administrative Support

Adequate administrative support is provided to maintain the momentum of the attack without interruption through the seizure of the final objective. Maximum use is made of external administrative agencies to reduce the load on division elements. Division administrative means are kept well forward to facilitate supply and evacuation and to relieve tactical commanders of administrative matters such as civil affairs and prisoners of war. They may be located to favor the main attack. Frequently during fast-moving actions, such as the exploitation, captured enemy supplies and materiel, particularly transportation and fuel, ease the burden on the supply system and increase the division's mobility.

145. Preliminary Operations

a. Movement to the Area of the Attack. The division may reach the area in which the attack will be conducted either in a covered movement protected by friendly forces in contact with the enemy or in an advance to contact as discussed in paragraph 161 through 170.

b. Relief in Place and Passage of Lines. The attack may be preceded by a relief in place or passage of lines by all or part of the division.

c. Developing the Enemy Position. Inasmuch as the defender attempts to screen his defensive position with covering forces, a thorough and aggressive reconnaissance by advance security forces is employed to determine the strength and location of the enemy's main position. If the situation is such that this action fails to develop the position, initiation of the attack may take the form of multiple reconnaissance in force. The command is alert to exploit opportunities which may occur during the development of the enemy's position.

d. Intelligence. All intelligence means are used to generate detailed intelligence which will provide the basis for sound plans.

Emphasis is directed toward the identification, size, and composition of targets, especially suitable nuclear targets. Information sought includes the hostile organization of the ground, unit identifications, the location and extent of obstacles, artillery and mortar positions, nuclear storage and delivery sites, locations of command installations and reserves, and avenues of approach into and within the position.

e. Final Preparation of the Attacking Force. The division may launch coordinated attacks from assembly areas or from march formations. If rapidity of action requires, the division may attack piecemeal, committing units as they become available.

146. Conduct of the Attack

a. The conduct of the attack depends upon the prevailing situation. Considerations affecting the conduct of the attack include the mission, terrain, enemy situation, nuclear fire support available, and the degree of air and ground mobility available. The following discussion is general in nature; conduct of the attack applicable to specific forms of maneuver is discussed in the succeeding section.

b. Immediately preceding the attack, a preparation of nuclear, nonnuclear, and chemical fires may be fired. The preparation is coordinated with the movement of attacking units to and across the line of departure.

c. Attacking units move rapidly from dispersed locations well in rear of the line of departure, under cover of preparatory fires and fires in support of the attack. These units maintain their dispersed formations until required to mass to achieve sufficient combat power to overcome enemy resistance. Once the mission which required the concentration of the force is completed, they again take up dispersed formations.

d. Once the attack is launched, flexibility and speed are paramount. The attack plan is vigorously executed and all favorable developments exploited. If the attack lags in one portion of the zone, the weight is shifted to the area offering the greatest opportunity of success. The progress of the attack is not delayed to preserve the alinement of units or to adhere to the preconceived plan of attack. Attacking units break the power of the enemy to resist. They do not become involved in indecisive action or mopup as they proceed. Units following reduce isolated enemy resistance and mop up as necessary or within their capability.

e. The attack is a series of rapid advances and assaults until the division objective is attained. Between areas of opposition, attack-

ing forces move rapidly in a partly deployed formation. As enemy resistance is encountered, the attacking echelons converge following closely their supporting fires until they are within assaulting distance of the hostile position. Nuclear fires may make the assault unnecessary or reduce the casualties which may be received during the assault. The assault is the final phase of the attack. It is a short, well-coordinated effort which overruns the objective. Supporting fires continue to the last possible moment and then are shifted to the flanks and rear of the enemy position. Following the assault, attacking units rapidly reorganize and continue the attack or prepare for other operations.

f. The reserve is held dispersed but ready for instant employment. Its vulnerability must be weighed against the requirement for immediate availability. Dispersed locations and the formation of combined arms teams in anticipation of employment tend to reduce the vulnerability and at the same time expedite its commitment. At times the commitment of a portion of the reserve is sufficient to accomplish the desired task. Anticipated or suspected targets for nuclear weapons facilitate the rapid employment of this element of the reserve. Nuclear fires in the attack must be at such time and locations as not to interfere with ground movement. Displacement of nuclear delivery means is executed in a manner to maintain a continuous nuclear fire capabilities throughout the attack.

g. The division commander uses all possible means to keep informed of the progress of the attack, the situation of his units, and the enemy reaction. He anticipates changes in plan and is prepared to alter the organization for combat, maneuver his forces, allocate and shift fires, and use his reserve. He decentralizes control to subordinate commanders when the situation requires, but regains it at the earliest possible opportunity. During the attack the division commander moves where he can best control and influence his forces.

h. During continuous day and night operations, leading elements are rotated to provide time for rest and maintenance.

147. Continuation of the Attack

a. Upon seizure of objectives, all means are used by the division to continue the attack without delay. Maximum use of supporting fire is made during this critical period. Reorganization is accomplished without specific halts. Minimum forces secure objectives, if required. Reconnaissance elements and motorized or airmobile infantry units maintain contact with the enemy, keeping him off

balance and obtaining information. The remainder of the division continues the attack as rapidly as possible.

b. Continuation of the attack with fresh troops, a new direction of attack, or exploitation by the reserve may require a passage of lines on a relief in place.

148. Discontinuance of the Attack

a. Contingencies may halt the attack. The commander must anticipate halts and prepare orders to include the time or circumstances of the halt, missions and locations of subordinate units, and command and control measures. To prevent congestion, some units may be diverted into assembly areas prior to the halt.

b. The commander may have freedom of choice in discontinuing the attack. In this event assembly areas are planned to aid defense, to minimize vulnerability to attack, and to facilitate renewal of the attack.

c. Actions taken by the division when discontinuing the attack include—

(1) Establishing a counterreconnaissance screen.

(2) Maintaining contact with the enemy and developing information required to plan future actions.

(3) Redeploying forces for the defense based on probable future employment.

(4) Accomplishing reorganization and supply concurrently with the above.

Section III. PLANNING THE ATTACK

149. Planning Sequence

The planning sequence commences with the receipt of a mission. Based upon information available to him from his staff and from higher, lower, and adjacent units, the commander then prepares and issues his planning guidance. Then following the preparation of staff estimates and the presentation of staff officers' recommendations to the commander, he completes his estimate of the situation and arrives at his decision. The commander's decision and his concept of operation are the basis for the operation plan.

150. Mission

The mission may be assigned by higher headquarters or developed by the commander. In some situations the mission is likely to be general in nature requiring careful analysis to determine the specific tasks that must be accomplished (par. 152*a*).

151. Planning Guidance

Planning guidance assists the staff in preparing or revising staff estimates. It may include the commander's analysis of the mission, any factors and aspects of the situation the commander considers important or unusual including the use of nuclear and chemical weapons, and any course(s) of action he may wish developed. Guidance in the employment of nuclear weapons may include—

a. The proportion of nuclear weapons to be retained in reserve.

b. The type targets to be engaged and the results desired.

c. Troop safety.

d. Restrictions on the use of nuclear weapons.

152. Estimate of the Situation

The estimate of the situation is the process by which the commander arrives at his decision. He analyzes various courses of action, noting the advantages, disadvantages, vulnerabilities to nuclear and other fires, risks involved, and operational requirements of each. He mentally war games the situation. Based upon this analysis, he compares the courses of action weighing the advantages and disadvantages of each, and reaches a decision. Detailed information on the estimate process is contained in FM 101–5. The following aspects of the estimate process are included for emphasis in infantry division offensive operations.

a. Analysis of the Mission. The mission is analyzed to determine the stated, implied, and deduced tasks of the division. These tasks can frequently be reduced to terrain objectives. Under conditions of fluid warfare, mission type orders are common. Such orders require careful analysis to insure that the intent of the higher commander is understood and accomplished. During the analysis of the mission, the decisive objective which best facilitates the accomplishment of the division's mission is selected.

b. A Sequence for Developing a Course of Action.

(1) *Main attack objective and direction of attack.* The main attack seeks the decisive objective of the division. The direction of attack is selected based on the nature of the terrain, maneuver room; available combat power, particularly nuclear weapons; and the enemy situation. During the development of the scheme of manuever for the main attack, there is a general visualization of the tasks to be performed by the secondary attack(s).

(2) *Combat power for the main attack.* Sufficient combat power is allocated to achieve decisive superiority over the enemy in the area of the main attack.

(3) *Secondary attack(s) objective(s) and direction(s) of attack.* Objective(s) and direction(s) of attack are selected for secondary attack(s) to assist the main attack.

(4) *Combat power for secondary attack(s) and the reserve.* Combat power for the secondary attack(s) and the reserve are determined concurrently because the requirements for these two may conflict. Adequate though minimum combat power must be provided the secondary attack(s) for the accomplishment of its mission. The reserve must be provided the means to accomplish its anticipated missions. Careful analysis of these conflicting requirements is essential to achieve the best balance. The use of nuclear weapons in the secondary attack(s) and in the reserve is considered during the determination of the combat power allocations.

(5) *Location of the reserve.* The initial location(s) of the reserve is selected. If possible, anticipated future locations and routes of movement are determined.

(6) *Fire support.* Specific nuclear fires and general allocations of nonnuclear fire support are planned concurrently and in the same sequence as the maneuver of the main and secondary attacks and the reserve.

(7) *Adjustment of the course of action.* The scheme of maneuver is adjusted to resolve conflicting force requirements and to complement the fire support plan. Security forces are allocated within the means available to assist in the accomplishment of the mission.

153. Concept of Operation

a. The commander's concept of operation is developed during the analysis and comparison of courses of action. This concept is presented to the staff at the time of announcement of his decision in sufficient detail to permit preparation of orders. The concept presents the commander's visualization of the attack to include—

(1) Objective of the attack.

(2) Development and phasing of the attack.

(3) General organization for combat.

(4) Use of fire support, including the firing of a preparation, and the results expected from such fires.

(5) General control measures to be used.

(6) Alternate plans for foreseeable contingencies.

b. This concept is included in the operation order. It is thus disseminated to provide subordinate commanders a basis for taking appropriate action in the absence of specific instructions or when deprived of communications with the division commander.

154. Development of Implementing Plans

Based upon the commander's decision and concept of operation, the operation plan and supporting plans are prepared for his approval.

155. Phasing

a. When time and space limitations imposed by the enemy, the terrain, or the friendly situation prevent the commander from visualizing his operation to the final objective, he must phase the operation. Requirements for major reorganization of the division during the attack necessitate phasing. Major reorganizations are caused by the commitment of the reserve, a change in mission, or the reorientation of a major subordinate unit.

b. Phasing of an operation is based on time (e.g., preparatory fire phase), on distance (intermediate objective or phase line), on terrain (crossing of obstacles), or on the occurrence of a particular event (commitment of enemy reserves).

156. Organization for Combat

The organization for combat tailors the command to meet the combat power requirements of the plan, and it must be capable of being rapidly altered to meet adjustments or changes in plan during the attack. An organization for combat includes three major elements: the maneuver forces, tactical support forces, and administrative support units.

157. Fire Planning

a. General. Fires to be planned include preparatory fires, counter-battery and countermortar fires, interdictory and harassing fires, fires in support of the attack, and defensive fires to cover reorganization on the objective and to repulse counterattacks. Nuclear and nonnuclear fires of both artillery and air are integrated to complement one another. Nonnuclear including chemical fires attack targets escaping damage from nuclear fires or on which nuclear fire cannot be used, maintain neutralization of and increase damage from nuclear fires, block reinforcement, and serve as an economy of force measure in areas not attacked by ground forces or nuclear fires. Normal fires are maintained prior to the preparation to preserve secrecy.

b. Nonnuclear Preparation.

(1) *General.* Considerations in determining whether or not a nonnuclear preparation should be fired include fire support means available, availability of target information, requirements for secrecy, and firing of a nuclear preparation and its expected results.

(2) *Effect of nuclear preparation.* Although a nuclear preparation is fired, troop safety or other limitations may result in some areas being unaffected. This together with the attendant loss of surprise may dictate the firing of a nonnuclear preparation.

c. Nuclear Preparations.

(1) *General.* Considerations involved in the determination as to whether or not a nuclear preparation is fired include means available, existence of suitable targets, impact upon surprise, requirements for troop safety, relative combat power of opposing forces, and creation of obstacles.

(2) *Relative strength of opposing forces.* The enemy's strength may be so great compared with that of the friendly force as to jeopardize success. The nuclear preparation may bring this ratio into more favorable balance.

(3) *Obstacles.* The creation of obstacles by nuclear weapons and the effect of these obstacles on maneuver must be carefully considered. The difficulty of traversing obstacles is considerably greater at night. Large, thick dust clouds which reduce visibility and impair control may occur from nuclear bursts. Mass fires caused by nuclear fires may restrict maneuver; the smoke produced by mass fires reduces visibility.

(4) *Alteration of terrain features.* This consideration is significant in night combat when terrain features are being employed as control measures.

158. Coordination and Control

a. General. Plans for coordination and control to support the plan of attack include the use of tactical control measures, the employment of the signal battalion and the brigade headquarters, and the location of the division commander and the various echelons of the division headquarters.

b. Tactical Control Measures.

(1) *Objectives.*

(*a*) Subordinate units of the division are normally assigned final objectives. Intermediate objectives are designated only when essential to the accomplishment of the division's mission. The assignment of an objective requires that the unit seize that objective and maintain control over it until relieved.

(*b*) Objectives may be used to provide unity of effort, to phase the attack to designate area responsibility during reorganization, or to facilitate a change in direction.

(*c*) An objective should be easily identified. It should compel the enemy to evacuate his position or risk destruction thereon. Its capture must be possible within the time and space limitations imposed and within the capability of the force to which assigned.

(2) *Line of departure.*

(*a*) When units are in contact, their present positions may be designated as the line of departure (LDis PPos). For units not in contact, a line of departure is normally prescribed for their employment based upon terrain. When the line of departure cannot be fixed on terrain as in a passage of lines, the anticipated friendly forward dispositions may be designated as the line of departure (LD is FFD).

(*b*) A line of departure should be generally perpendicular to the direction of advance, easily recognizable on the ground, and as close to the enemy as possible. It should be protected from small-arms and other flat-trajectory fire and be under control of friendly forces. If nuclear weapons are used, its location should conform to the commander's guidance on troop safety.

(*c*) The dispersion of the division laterally and in depth may make it desirable to assign separate lines of departure and times of attack to the various attacking units.

(3) *Time of attack.*

(*a*) In selecting the time of attack, consideration is given to the time required for subordinate units to reconnoiter, prepare and coordinate plans, issue orders, organize the attacking units, and move to the line of departure.

(*b*) Stereotyped times of attack must be avoided to enhance surprise and to prevent prior preparation by the enemy. Attacks of subordinate units may be echeloned in time to mislead the enemy and to allow the shifting of supporting fires to the successive attacks. Simultaneous attacks provide maximum mass in the initial assault and reduce the enemy's ability to concentrate his fires as in successive attacks.

(*c*) Nuclear fires affect the time of attack. Time is required for indirect damage assessment and the issuance of necessary modifying orders. Normally it is desirable that the attack follow the nuclear preparation as soon as damage assessment is completed. Under some conditions, however, dust and smoke may delay the attack until adequate visibility exists. In addition a habitual relationship of time of attack to the time of nuclear preparation must be avoided.

(*d*) Units, particularly those with mission type orders, continuing the attack or entering the exploitation phase, may be assigned a general rather than an exact time of attack, e.g., "at once," "without delay," or "continue."

(4) *Zone of action.*

(*a*) The zone of action should provide adequate maneuver space for subordinate units and be commensurate with their capabilities. Where possible, it should wholly include key terrain features and avenues of approach thereto. It should extend as a minimum beyond the final objective to the depth necessary for the coordination of fire support for the seizure and consolidation of the objective.

(*b*) The zone of action is defined by the establishment of lateral boundaries. Boundaries must be easily recognizable on the ground. Units may move temporarily into adjacent zones after coordination with the commanders concerned and notification of the next higher commander. Such movement must be controlled to avoid interference with the adjacent units and unwarranted massing of troops. Similarly boundaries do not restrict the emplacement and movement of artillery and other supporting weapons provided coordination is effected.

(*c*) Boundaries are favored when assignment of area responsibility is required, to facilitate coordination of fires including nuclear fires between two adjacent units, or to delimit responsibility of converging forces in a restricted area. When boundaries are used for the purpose of requiring a unit to clear the area of enemy forces, the operation order must clearly specify this purpose. If required, a direction of attack can be assigned within the zone of action.

(*d*) See paragraph 67 for fire coordination aspects of boundaries.

(5) *Axis of advance.* An axis of advance indicates the general route or direction of movement of a unit. A unit advancing on an axis is not required to clear the area along the axis and may bypass enemy forces which do not threaten the accomplishment of its mission. The axis of advance is used except when more restrictive control, i.e., a direction of attack, is required.

(6) *Direction of attack.* Because of its restrictive nature, the direction of attack is used only when necessary. It may be used to insure that a secondary attack makes maximum contribution to the main attack. A unit conducting the main attack is rarely assigned a direction of attack.

(7) *Phase lines and check points.* Phase lines and checkpoints are established as required to coordinate the attack and to facilitate the implementation of contingency plans. They are useful in controlling rate of movement.

(8) *Assembly area.*

(*a*) An assembly area is an area in which a command assembles preparatory to further action. Orders are issued, maintenance and supply accomplished, and the organization for combat completed.

(*b*) The location of the assembly area is relative to the mobility of the force. A motorized, mechanized, or airmobile unit can attack from an assembly area farther rearward than a unit with foot mobility. To reduce nuclear vulnerability, multiple dispersed assembly areas are used. Assembly areas near units in contact and other large concentrations are avoided.

(*c*) Assembly areas may be so far rearward as to require refueling prior to crossing the line of departure. Refueling areas are designated along the routes forward where units halt for refueling. Final coordination may be conducted concurrently with the refueling operation. Units then proceed directly to the line of departure or attack positions.

(*d*) Assembly areas should be concealed from air and ground observation and be of such size as to avoid presentation of lucrative targets to artillery, air, or nuclear attack. Suitable routes forward should be available. Ground observation and natural protection

from armor attack are desirable. When possible they should be beyond the effective range of the bulk of enemy artillery.

(*e*) Assembly areas may be designated for dispersal of units following the attack.

(9) *Attack position.* The division does not use an attack position nor does it assign attack positions to its subordinate elements except in the case of attack by infiltration. Although commanders of company sized units normally select or designate their own attack positions, attacking units such as a battle group may assign attack positions to subordinate units. This procedure facilitates deployment before crossing the line of departure. A unit in an attack position may present a vulnerable target to nuclear weapons. Consequently, an attack position is occupied for the minimum essential time, normally only that required to complete deployment.

159. Administrative Support

a. The plan of attack must be capable of being administratively supported. The combat power available to the division may enable it to seize objectives which exceed its organic administrative capability to support. In such cases, assistance from higher headquarters must be obtained.

b. During the attack, administrative installations and units are located to sustain the attacking units. Centralized control of logistical support is desirable. However, control may be decentralized or logistical elements attached to supported units when required.

160. Orders

Timely orders enable subordinate elements to reconnoiter, to prepare and coordinate their plans, and to issue necesasry instructions to their subordinate elements. The use of warning and fragmentary orders and concurrent planning facilitate this process.

Section IV. THE ADVANCE TO CONTACT

161. General

a. The advance to contact is the means of gaining contact or of reestablishing lost contact. Its purpose is the early development of the situation and the seizure of terrain which provides a maneuver advantage prior to decisive engagement. Long-range missile fires may enable the advancing force to engage and gain fire

superiority over the enemy before physical contact is made by maneuver elements.

b. The advance is conducted on a broad front using the techniques of the tactical column and approach march. It is characterized by decentralized control and piecemeal commitment of forces. The advance to contact terminates when determined enemy resistance requires the deployment and coordinated effort of the division.

162. Basic Considerations

a. Primary emphasis is placed on the best use of the road net and the early seizure of terrain which facilitates the advance. Provisions are made to overcome obstacles and for rapid passage of defiles.

b. Primary tactical groupings are the covering force, advance guard(s), flank and rear security forces, and the main body. These groupings provide for—

(1) Rapid and uninterrupted advance of the division.

(2) Adequate all-round security and the early development of the situation.

(3) Retention of the bulk of the combat power uncommitted during movement for rapid employment as required upon contact with enemy forces.

c. The basic formations are the line, the column, multiple columns, and echelon. Normally the advance is conducted in multiple columns. Subordinate tactical groupings adopt formations or variations of these formations which facilitate the accomplishment of their assigned missions.

(1) *Line formation* is desirable when considerable enemy information is available, maximum combat power forward is indicated, and speed is esential. This formation rapidly generates combat power forward. It lacks flexibility to react to the flanks, is limited in reserves, and is difficult to control.

(2) *Column formation* provides security, maximum flexibility, and ease of control. It maintains the bulk of the combat power uncommitted. Deployment of forces forward is slow. This disadvantage is somewhat offset by the ease and rapidity with which nuclear weapons and airmobile forces can be committed. In a vague situation, this is usually the most suitable formation.

(3) *Multiple columns* incorporate many of the advantages of the line formation and of the single column. Deploy-

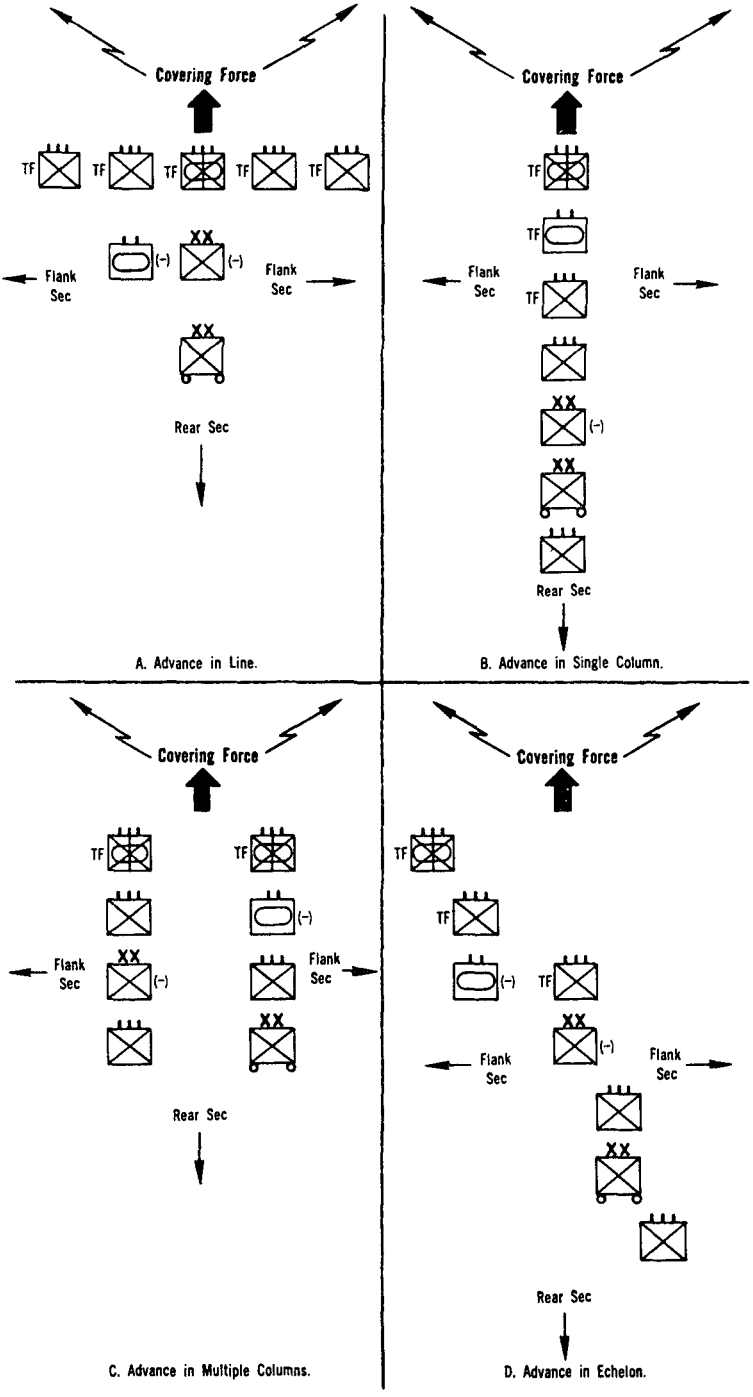


Figure 12. Formations for advance to contact.

ment forward is facilitated without the accompanying loss of control, flexibility, and combat power in the main body.

(4) *Echelon formation* retains in varying degrees the advantages and disadvantages of both the column and line formations. This formation can be used to refuse an exposed flank.

d. Imminence of contact and the terrain largely determine the degree of control required. Control must permit rapid response by subordinate units to changes in mission, march procedures, organization, and tactical control measures. Axes of advance are favored if maneuver room permits. Army aircraft can be used to facilitate control.

e. Nuclear weapons increase the speed of advance because in conjunction with relatively small forces they can eliminate enemy resistance which might otherwise require the deployment of sizable elements. Nuclear fires can provide security by blocking enemy avenues of approach into the area of operation or by denying the enemy access to terrain essential to the advance. Toxic chemicals in highly persistent concentrations can be used in a similar manner. The vagueness of the enemy situation normally requires that the bulk of nuclear fires be held on an on-call basis.

f. Tactical air force aircraft in day and night, visual, photo, and electronic reconnaissance missions augment the efforts of Army aircraft to detect the location of enemy units or movement into the area and to provide information on the nature of the terrain being traversed. Tactical aircraft reinforce frontal and flank security efforts. The use of column cover or air alert aircraft is habitual when contact is imminent.

g. Airmobile forces greatly increase the capability of security forces. They can seize key terrain essential to the uninterrupted advance of the command. Airmobile elements in the reserve (main body) increase greatly the rapid and decisive use of this force.

163. Planning the Advance

The commander follows the procedures in paragraphs 149 through 160 to determine the best organization and distribution of force to be used initially. Primary consideration is directed toward the anticipated actions during the advance and the subsequent employment of forces. During the advance the commander continually analyzes the situation based on the latest developments. He shifts forces and alters his plan of advance as required.

Upon gaining contact he again employs the procedures in paragraphs 149 through 160.

164. Organizqtion for the Advance

a. General. Organization for the advance depends upon the mission, available intelligence, probable order of commitment of units, and the relative mobility of units.

(1) Infantry, armor, artillery, and engineers are interspersed throughout the formation.

(2) Administrative support units and installations are located to provide the required support but must not interfere with tactical movements. Normally, these units follow combat echelons.

(3) The decentralized nature of the operation normally requires that the division be organized into task forces.

b. The Covering Force.

(1) Missions assigned the covering force are broad in nature. They may include development of the situation, destruction of enemy resistance, seizure of key terrain, or containment of enemy forces.

(2) The composition and size of the covering force are tailored to accomplish its mission. It normally operates at considerable distances in front of the main body. A highly mobile force such as the cavalry squadron or an airmobile, motorized, or mechanized battle group provides the basic element of the task force. As appropriate it is reinforced with aviation, armor, infantry, cavalry, artillery, and engineers. The covering force is supported by tactical air force aircraft for long-range reconnaissance and offensive strikes, and by Army aircraft for short-range reconnaissance and control. Nuclear fires support the covering force as required. The effectiveness of the covering force can be greatly increased by the inclusion of airmobile forces, however small.

(3) The covering force normally operates under division control. However, terrain considerations may require that its control be decentralized to commanders of the column marching on certain routes.

(4) When the division is marching as part of a larger force, the covering force is frequently furnished and controlled by the higher headquarters. The leading elements of the division are then the contact forces between the division advance guard and the covering forces.

c. The Advance Guard. Each column of the main body provides and controls an advance guard. The mission of the advance guard is to insure the rapid uninterrupted advance of the main body. Airmobile, mechanized, or motorized infantry and cavalry, suitably reinforced, are best suited for this role. Close cooperation with reconnaissance aviation is essential.

d. Flank and Rear Security Forces.

(1) Flank and rear security forces protect the main body from ground observation and surprise attack. These forces must be strong enough to defeat minor enemy forces or to delay strong enemy attacks until the main body can deploy.

(2) The flank guard travels on routes paralleling that of the main body or moves by bounds to occupy key positions. The rear guard follows the main body.

(3) The strength and composition of the rear and flank guards are similar to the advance guard. Airmobile forces are ideal flank guards. Elements of the cavalry squadron are well suited to flank and rear area security missions. Should the flanks or rear of the division be secured by the presence of adjacent or following units, security forces can be appropriately reduced.

(4) Flank and rear security forces operate either under control of the division or the elements of the main body marching in proximity to them.

e. The Main Body.

(1) The main body comprises the bulk of the division's combat power. It is immediately available to attack major enemy forces or to seize the division objective.

(2) Units of the main body are organized for combat and are positioned in the advancing columns to permit maximum flexibility for employment during the advance or after contact with the main enemy force has been made.

165. Coordination and Control

a. A division command installation marches well forward in the main body. The brigade headquarters assists in control.

b. The advance is carefully planned and the commander's concept of the advance and anticipated subsequent action are known by all subordinate commanders. Because of the dispersed nature of the operation and the many contingencies which may arise, the division normally organizes into task forces. Minimum tactical control measures are used, consisting principally of axes of ad-

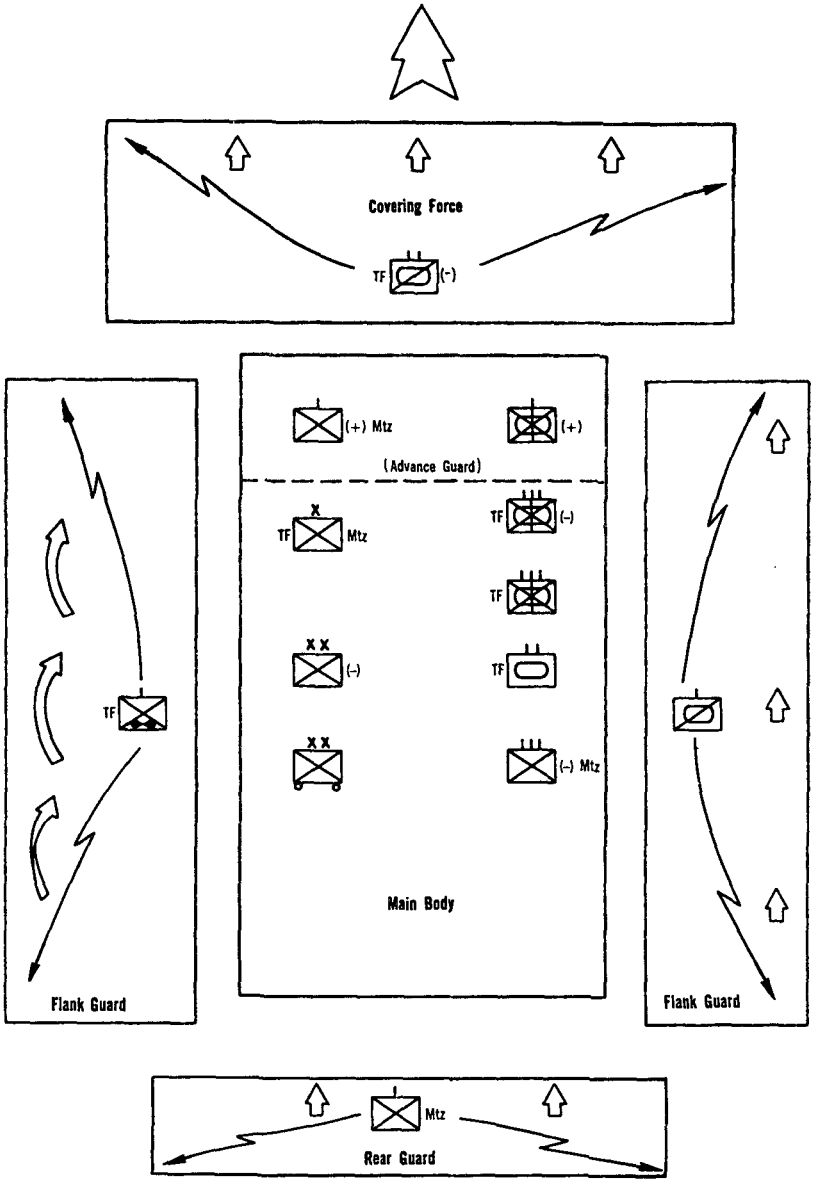


Figure 13. An organization for advance to contact (multiple columns).

vance, phase lines, checkpoints, march objectives, and fire coordination measures, as required. Execution of the advance is largely based upon the aggressive action by task force commanders acting on their initiative in accordance with the commander's concept. As the situation develops and the advance transforms into an attack, the division commander resumes centralized control of the division.

c. Maximum, rapid dissemination of information obtained by the covering force is essential. When communications security requires, this is accomplished by transmission of information from the covering force to the division with other stations maintaining listening silence.

166. Security

Security is obtained by the use of the security and covering forces discussed in paragraph 164, by the use of tactical air force and Army aircraft, and by control of communications. Security is enhanced by rapid, aggressive movement to seize key terrain which facilitates the advance and protects the command, denying such terrain to the enemy. The use of dispersed formations provides protection against nuclear attack but may increase the difficulty of maintaining adequate mutual support between the various tactical groupings. This difficulty may be overcome in part by the use of nuclear fires and airmobile forces.

167. Administrative Support

a. The advance to contact is characterized by the high rate of consumption of class III supplies, heavy wear on vehicles, low rates of ammunition expenditure, and relatively low casualty rates. It is complicated by the dispersed nature of the operation, the speed of forward movement, and variables injected by the enemy and terrain. The fast-moving nature of the operation and the high class III consumption require careful planning of administrative support. Administrative support must be provided to enable the command to move without delay. Mobile distributing points and Army aircraft facilitate this. Augmentation of organic administrative support means by higher headquarters may be required.

b. Of particular significance is the need for engineer maintenance of routes forward. This may conflict with the requirements for engineers with the tactical groupings, requiring that additional engineer support be furnished by higher headquarters.

168. Conduct of the Advance

The advance to contact is marked by rapid aggressive action. Local situations are rapidly developed by the covering force. Within its capability it destroys enemy forces which will interfere with the movement of the main body and contains those it cannot destroy. Nuclear weapons are used against targets of opportunity to destroy enemy forces, to prevent their movement against the division, or to deny key terrain to the enemy. The main body commits elements to reduce pockets of resistance bypassed by the

covering force. The division commander is apprised of the progress of the various tactical groupings and their anticipated actions. He commits forces as they become available to maintain the momentum of the advance. All efforts are directed toward keeping the enemy off balance and preventing small elements from establishing an effective defense or unified action against the division.

169. Subsequent Operations

Following the establishment of contact with major enemy forces, the division regains centralized control over its elements. If piecemeal commitment of elements of the division has not gained a decision, the division plans and executes a coordinated attack. When marching as a part of a larger command, the division may be relieved in place or passed through by units following.

170. Covering Force Operations

a. The division may be the covering force of a larger unit. Such a mission requires that it be augmented with additional transportation, either trucks or armored carriers.

b. The principles and considerations of the advance to contact generally apply to the division with a covering force mission. Covering force operations are conducted on a wide frontage. The division advances in multiple columns, rapidly developing the situation, providing security for the command, and preventing its delay. The mission, which is normally very broad, may require attacks to destroy enemy resistance, containment of large enemy forces, or seizure and security of key terrain. The division concentrates its attention on resistance which is of sufficient size to threaten the main body while bypassing or containing minor resistance. The division reports the nature and location of forces which it has bypassed. Following and supporting units will frequently be available to relieve elements of the division involved against such resistance, thereby permitting them to disengage and rejoin the covering force.

Section V. THE PENETRATION

171. General

a. In the penetration the main attack passes through the enemy's principal defensive position, rupturing it completely, and seizing objectives which destroy the continuity of his defense. The divided enemy forces are then destroyed in detail, and mobile forces exploit through his vital rear areas.

b. The penetration consists of three phases: rupture of the enemy's defensive position, widening of the gap, and seizure of objective which destroy the continuity of the enemy's defensive position. These phases are followed by the exploitation. The phases of the penetration and the subsequent exploitation blend into a continuous operation, frequently overlapping one another. When powerful fire support is applied and the division is sufficiently mobile, the phases may be so condensed in time as not to be recognizable during execution.

c. The infantry division may penetrate an enemy position and conduct the exploitation, or it may rupture a position and be passed through by an exploiting force, frequently an armored division. In the latter role the infantry division normally follows and supports the exploiting force unless assigned other missions. The infantry division, suitably reinforced, can be used as the exploiting force. In conjunction with other forms of maneuver, the division may assign subordinate elements to tasks requiring penetration, e.g., a secondary attack during an envelopment by the division.

172. Basic Considerations

a. A penetration is demanded when enemy flanks are unassailable, or when time does not permit another form of maneuver. A penetration is favored or permitted when the enemy is overextended, when weak spots are detected in his position, when terrain and observation are favorable for more effective combined arms operations, or when strong fire support, especially nuclear fires, is available.

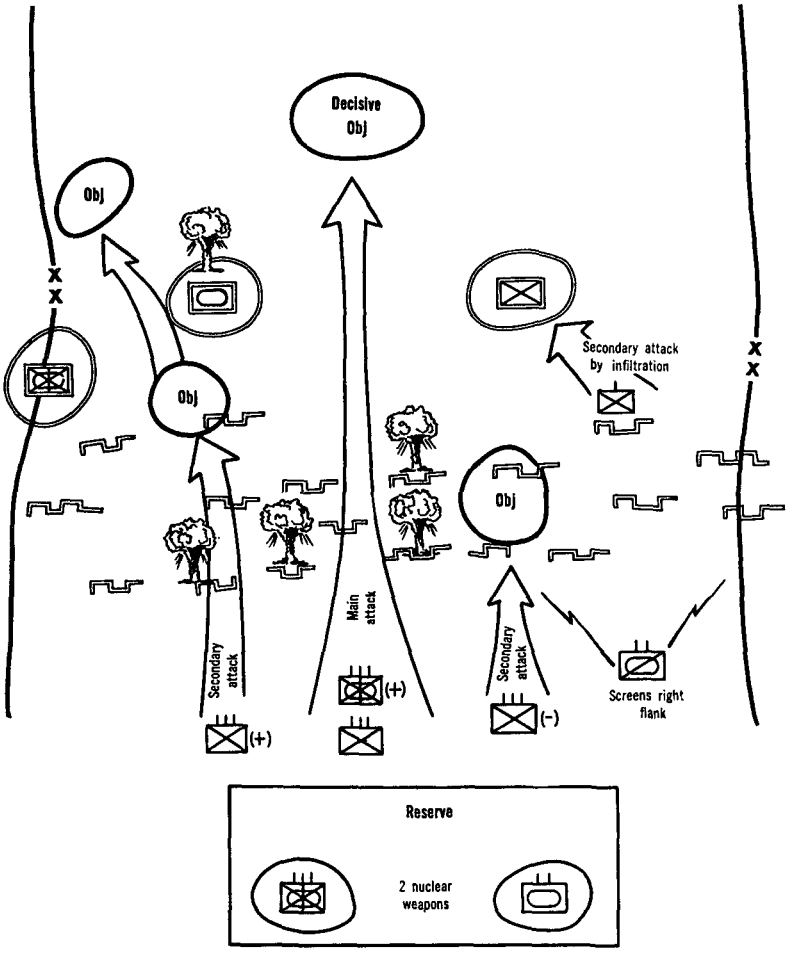
b. The penetration of a well-organized position requires a preponderance of combat power and continued momentum of the attack. The attack must move rapidly to seize objectives which destroy the continuity of the defense. If the attack is slowed or delayed, the enemy is given time to react. If the rupture is not made sharply and the seizure of the objectives accomplished, the attack degenerates into a pushing type action or frontal attack. This results in high casualties and affords the enemy an opportunity to fall back on his routes of communications, avoiding destruction.

c. Selection of the location of the penetration depends upon—

(1) *Terrain.* Terrain must support the mobility of the division. This requires evaluation of soil trafficability, nature and extent of obstacles, and the road net. Fields of fire and observation for the control of fires are necessary.

(2) *Strength and depth of the enemy position.*

(3) *Maneuver room.* The attacking force should not be unduly restricted by boundaries or lateral obstacles.



NOTES: 1. Nuclear fires assist rupture of position.
2. Secondary attacks widen gap and prevent movement of enemy reserve against main attack.
3. Reserve consists of 2 infantry-tank teams, 1 infantry heavy and 1 balanced, and 2 nuclear weapons.

Figure 14. Division conducting a penetration.

(4) *Distance to the objective.* A short direct route to the decisive objective is desirable.

(5) *Surprise.* If surprise can be enhanced by using a particular area thus obtaining more rapid and decisive results, the considerations above are of less importance.

(6) *Plans of the higher echelon.* The location selected must conform to the plan of the higher headquarters.

d. The main attack is on a relatively narrow frontage and is directed toward the decisive objective. The secondary attack(s) prevents the enemy from disengaging or widens the gap. Reserves

are ready to reinforce or relieve the main attack and to exploit seizure of the objective. The depth of the decisive objective may require that the reserve pass through the main attack forces after rupture of the position to seize the objective.

e. The width and depth of the penetration depend upon the depth of the enemy position and the combat power available to the division. The wider the penetration, the more difficult it is for the enemy to close it but the greater the resources required to accomplish it. The deeper it is, the more effective is the "rolling up" action against the hostile flanks and the more difficult for the enemy to reestablish his defense by withdrawal to a new location.

f. When the division is attacking against a weak enemy or desires to isolate an extremely strong defensive position, it may execute a multiple penetration. This is an attack consisting of two or more convergent penetrations against weak localities. Strong enemy defenses are contained by secondary attacks. When the penetrations reach a suitable depth, the bypassed forces are reduced and the attacks combined into a single attack. However, without especially strong combat power there is a risk that the attack will result in an indecisive and possibly unsuccessful frontal attack.

173. Fire Support

a. The penetration is normally preceded by a preparation which prepares enemy positions for assault, limits his ability to react against the attack, and covers the movement of attacking units. Suitable targets include defensive positions, fire support means, command and control installations, and reserves. Smoke reduces the effectiveness of enemy observation.

b. Nuclear weapons contribute immeasurably to the effectiveness of fire support including the preparation. Their great destructive capability which includes effects which produce many obstacles, dictate that nuclear fires and the plan of maneuver be formulated concurrently. It is frequently preferable to use these weapons on the flanks of, rather than in the area of, the main attack. They can be used against reserves or to widen the gap, thus reducing the requirements for troops in this role.

c. Toxic chemicals in nonpersistent concentrations are a rapid, effective method of expediting rupture of the position. They increase the friendly combat superiority in the area without producing obstacles.

d. On-call fires are planned to neutralize enemy reserves, to prevent movement into or out of the area of operations, and to

destroy any targets which seriously threaten the accomplishment of the mission.

e. Enemy forces isolated during the rupture of the position may be reduced by fire. Nuclear and chemical fires are suited to this task.

174. Conduct of the Penetration

a. Following the preparation of nonnuclear, nuclear, and chemical fires, attacking units drive through the enemy's defensive positions. Although the division commander normally will not assign intermediate objectives to the main attack, subordinate commanders usually designate close in objectives to coordinate their attacks through the defensive position and to insure that their units generate maximum combat power in desired areas.

b. Secondary attacks by infiltration may neutralize enemy fire support means and command facilities. They may also seize terrain which blocks the movement of reserves against the main attack or which facilitates its continuous movement.

c. As the attack progresses, units of the secondary attacks secure the flanks of the main attack or widen the gap. Elements of the reserve are repositioned where they can assist the main attack and secure key terrain which has been seized. Enemy counterattacks are rapidly engaged using elements of the reserve or by shifting fires. Nuclear weapons are suited to the destruction of counterattacks. However, troop safety considerations require judicious application of nuclear fires in these cases.

d. As the main attack breaks out of the area of enemy defenses, it increases its speed and momentum to seize the decisive objective. If the objective is at a depth beyond its capability or if its strength has been depleted, the main attack force is passed through by reserve units which continue to the objective. A suitable reserve is reconstituted as soon as practicable from forces available such as the original main attack force.

e. Upon seizure of the decisive objective, elements of the main attack force, as well as the reserve, exploit to destroy command and control installations, logistical support installations, fire support means, and enemy units attempting to escape. Security forces are promptly dispatched to give warning of and delay enemy countermeasures.

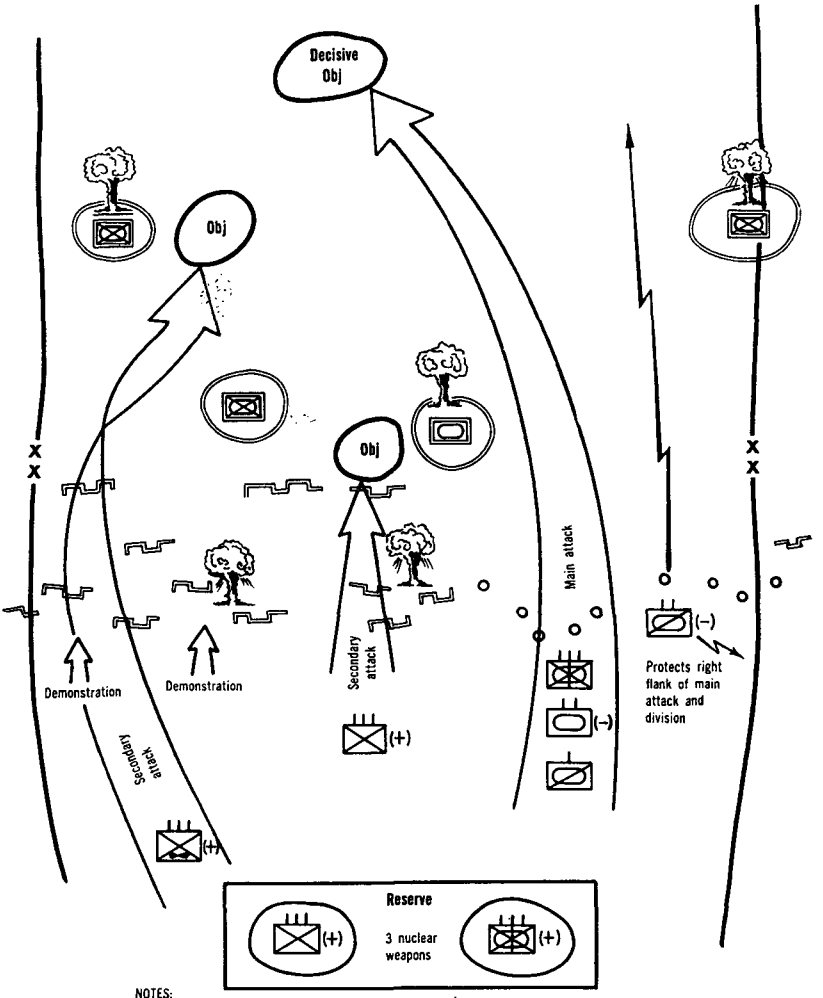
f. Enemy forces which have been divided by the penetration and held by action of the secondary attacks are rapidly destroyed. Units engaging these forces and other elements of the division displace rapidly, and the division continues the exploitation or prepares to execute other missions.

g. Throughout the attack, all efforts—tactical and administrative—are devoted to maintaining the violence and momentum of the main attack.

Section VI. THE ENVELOPMENT

175. General

a. In the envelopment, the main attack passes around or over the enemy's principal defensive positions to seize objectives which cut his escape routes and subject him to destruction in position. Secondary attacks hold the enemy in position during the advance



NOTES:
1. Demonstrating forces are detached from units in reserve.
2. Secondary attacks and demonstrations hold enemy in position and prevent his use of reserves against the main attack.

Figure 15. Division conducting an envelopment.

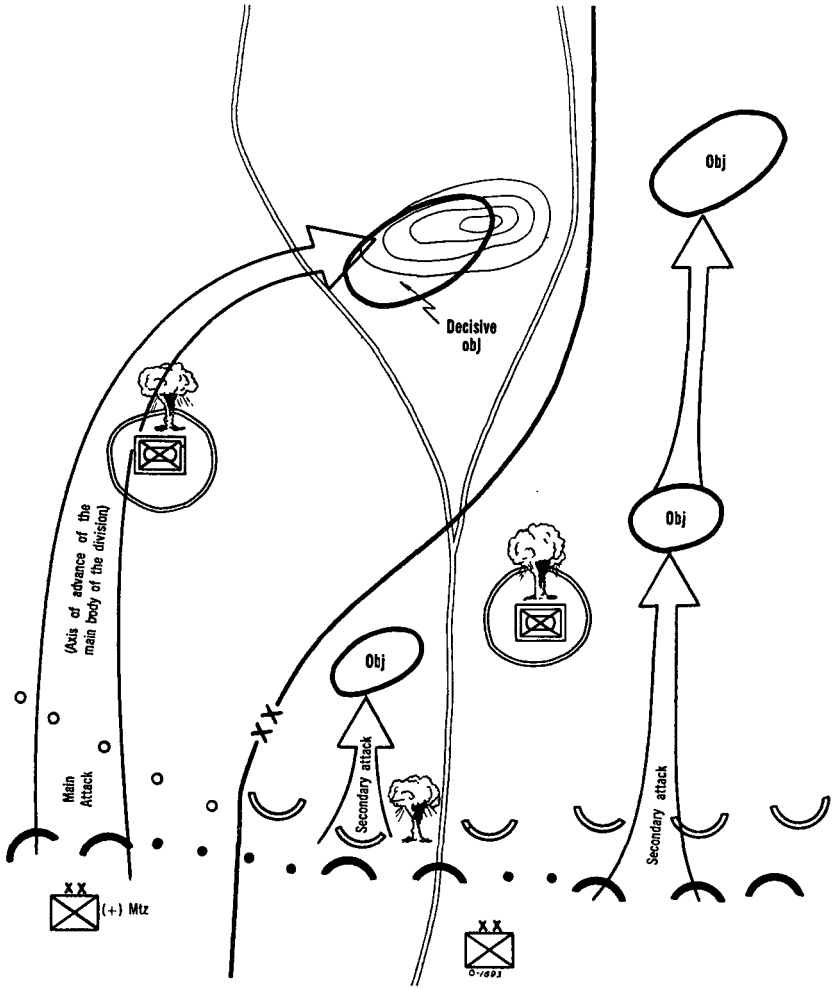


Figure 16. Motorized infantry division as an enveloping force for a higher echelon.

of the main attack. The envelopment forces the enemy to fight in two or more directions simultaneously to meet the converging attacks.

b. The infantry division may be the enveloping force for a higher echelon. The division may use the envelopment for its main attack or may assign missions to subordinate units which require them to envelop.

176. Basic Considerations

a. The envelopment by ground attack requires that the enemy have an assailable flank. An assailable flank is one which can be circumvented without fighting a major engagement.

b. An envelopment by aerial means requires that adequate flak suppression fires be available or that the enemy's dispositions or capabilities will not interfere materially with the flights of large numbers of aircraft. Ground patrols and infiltrating forces may be used to reconnoiter and secure the corridor(s) to be used. Direct airmobile assault landings against occupied objectives normally are not deliberately attempted. Plans for the use of airmobile forces must include provision for link-up with ground attack forces.

c. The success of the envelopment depends largely upon surprise, mobility, and the ability of secondary attacks and deception to hold the enemy in place. Surprise is gained by secrecy, deception, unexpected maneuver, and speed. Mobility is increased by the use of airmobile, mechanized, and motorized units and the skillful use of terrain.

d. Rapid movement of the main attack to its objective is essential to prevent the enemy's movement of reserves to counter it or to occupy previously prepared positions. Vigorous secondary attacks prevent the enemy from reconstituting reserves from other portions of his front.

e. The commander executing an envelopment must be alert that the weakly defended area through which he is attacking does not lead into an area selected by the enemy as a killing ground. Analysis of the terrain and the enemy's capabilities together with prompt evaluation of indications contribute to the security of the command. Mobile forces and nuclear weapons in reserve, aerial reconnaissance, and the careful selection of objectives and direction of attack for secondary attack forces further enhance the security of the main attack.

f. Envelopments may be close or wide based upon the initial distances between attacking elements. In a close envelopment, fire support of the secondary attack force as well as other fire support elements of the division support the enveloping force to its objective. In a wide envelopment, the enveloping force moves at a greater distance from the secondary attack, making fire support more difficult. In this situation artillery may be attached to the enveloping force.

g. Minimum control measures are assigned to the enveloping force. Normally the axis of advance is used although initially the use of a zone of attack may facilitate control and coordination with an adjacent secondary attack.

177. Conduct of the Envelopment

a. The enveloping force moves rapidly to the vicinity of its line

of departure. Diversionary actions mask the noise and direction of its movement.

b. The attack may be launched simultaneously across the front or the times of the secondary and main attacks may be staggered, that of the secondary attacks normally being earlier, to increase deception.

c. Because of the requirement for secrecy, the limited targets, and the inability of local forces to impede the attack in the area of the main attack force, a preparation usually is not fired in support of the enveloping force. If one is fired, it is violent but of short duration. The secondary attack(s) may be preceded by a preparation.

d. The enveloping force moves rapidly and directly to its objective, bypassing enemy forces which might delay it. These forces are reduced by fires or following units. Cavalry or other security forces, frequently operating under division control, protect its exposed flanks.

e. Secondary attacks and fires hold the enemy in position and prevent his use of reserves against the main attack. Infiltrated forces may block the movement of enemy reserves, attack his fire support and command control means, or seize terrain which assists the enveloping force.

f. If the enemy attempts a frontal attack, the secondary attack blocks or delays it while the main attack continues the envelopment or is moved inward to counterattack.

g. If the enemy attempts to envelop the main attack or extend his flank beyond it, the division commander may elect to penetrate the enemy's overextended front. This takes advantage of the weakness offered by the enemy in reacting against the envelopment. An attempt to outflank the enemy's extension may lead to overextension of the division or a dangerous separation of the main and secondary attack.

h. The division commander is alert to detect opportunities to exploit success with his reserve. These opportunities may be either in the area of the main or secondary attacks. When the reserve is committed, another one is constituted as soon as practicable.

178. Double Envelopment

a. A double envelopment is executed by two enveloping forces and a secondary attack force. It entails the simultaneous envelopment of both flanks. It requires a great preponderance of force and may be difficult to control. Nuclear weapons contribute greatly

to the combat power required. The force executing a double envelopment must be capable of deploying on a broad front against an enemy on a narrower front or one which has limited maneuver capability.

b. The conflicting requirements for providing combat power to two enveloping forces, a secondary attack force, and the reserve generally prevent the division from executing this type maneuver unless it has strong nuclear support or is opposed by a substantially inferior enemy. The secondary attack frequently of necessity will be frontal in nature. Nuclear fires may be used with a secondary attack to reduce the requirement for troops.

c. Dependent upon mutual support considerations, simultaneous envelopment by ground attack and airmobile forces may not possess the undesirable aspects of a double surface envelopment or require so great a preponderance of force.

d. An initial envelopment of one flank may create favorable conditions for passing to the double envelopment by commiting the reserves around the other flank.

179. The Turning Movement

a. In the turning movement, a variation of the envelopment, the attacking force passes around or over the enemy's main force to seize objectives deep in his rear, forcing him to abandon his position or to divert major forces to meet the turning threat. The enemy is then destroyed on ground of the attacker's choosing. The turning force is generally out of supporting distance of any other ground attacking forces.

b. The infantry division may be the turning force for a higher echelon. Under certain conditions the division may execute a turning movement within its own resources.

c. The infantry division requires additional motorization or mechanization when acting as a turning force. Airmobility greatly enhances its capability and increases the speed of execution. The attachment of additional armor and cavalry is desirable.

180. Conduct of the Turning Movement

a. The turning movement differs from other envelopments in that it is not directed at the destruction of the enemy in position. It avoids attacking the flanks and rear of the enemy's main defensive position. The turning movement seizes vital areas deep in the hostile rear which prevent the escape, support, or reinforcement of the enemy's main force. It is used when an opportunity exists

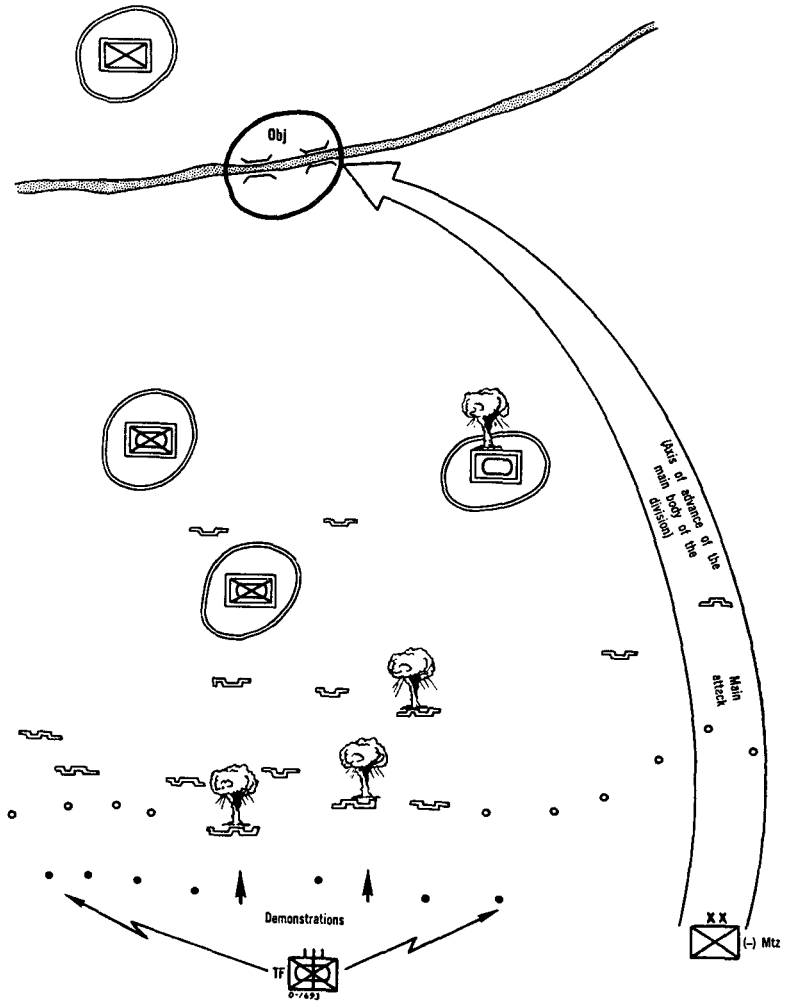


Figure 17. Division conducting a turning movement using a mechanized battle group task force as a screening and deception force.

to seize vital areas in the enemy's rear before his main force can escape or be reinforced. When the enemy occupies a strong defensive position, the turning movement offers a means of causing him to abandon the position and to fight on ground more favorable to the attacker.

b. Sufficient combat power must be applied by a holding force against the enemy force to prevent its interference with the turning force. The application of this combat power may be in the form of a secondary attack or of a screening operation. Because the turning force and the holding force frequently operate beyond supporting distances of each other, each force must have sufficient

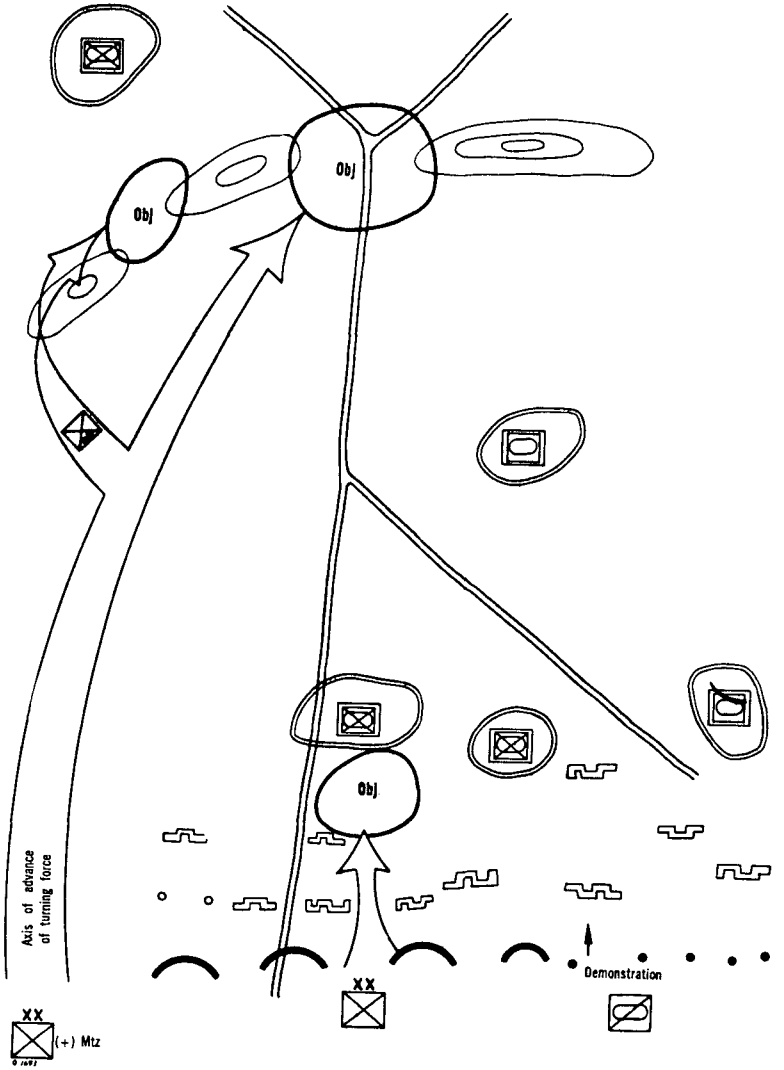


Figure 18. Motorized infantry division as a turning force for a larger echelon.

combat power and mobility to avoid defeat in detail. The turning movement requires secrecy, mobility, and deception.

Section VII. INFILTRATION

181. General

a. The infantry division can conduct main or secondary attacks by infiltration. It also uses infiltration as a means of obtaining intelligence and of harassing the enemy.

b. Because of the interspersed deployment of friendly and enemy

units during infiltration, the nuclear vulnerability of attacking units is reduced by the enemy's inability to employ any but the smallest of weapons against these attacks.

c. When operations are conducted in friendly territory, infiltration is a means of regulating destruction from friendly nuclear attacks through generation of accurate target intelligence. Attack by infiltration also permits the destruction of enemy units and installations without recourse to nuclear fires and may curtail the use of nuclear fires by the enemy because of the absence of remunerative targets.

182. Basic Considerations

a. An infiltration is a relatively long operation. Planning must be in great detail and unit commanders and their troops must be carefully briefed. The movement by stealth through enemy positions and the assembly of infiltrating groups prior to decisive action are slow. The use of airmobile units can increase the rate of movement considerably.

b. Infiltration is facilitated by the use of terrain which limits the enemy's observation and surveillance of the routes to be used. Woods, swamps, and broken ground are examples of the areas suited to infiltration. Within an area of infiltration, suitable routes for the movement of small groups, half squad and larger, are selected by the infiltrating unit. In contrast to other forms of maneuver, avenues of approach in the traditional sense are not used. Frequently the avoidance of avenues of approach increases the probability of success. Conditions of reduced visibility such as darkness, fog, and falling snow assist the undetected movement of infiltrating groups. Such conditions, however, cause an alert enemy to tighten his surveillance methods.

c. A widely dispersed enemy force with gaps existing between his defensive positions invites infiltration. Infiltration against an alert enemy equipped with means of detecting movement, requires the careful use of deception and diversionary measures, electronic countermeasures, and passive security measures. Widespread enemy use of illumination deters infiltration unless it can be neutralized.

d. Suitable objectives for attack by infiltration are key terrain features, especially those which restrict the movement of enemy reserves or compartmentize his defensive position; reserves; fire support means; command and control installations; and critical logistical installations. The objective(s) selected must contribute directly to the accomplishment of the division's mission and should not result in dissipation of strength.

e. Small infiltrating groups can be assigned missions of obtaining intelligence, of harassing enemy units and installations, or of interdicting enemy routes. The effect of such missions on coordination of friendly fire support must be carefully weighed.

f. Infiltration is a difficult maneuver to coordinate and control. Plans can be carefully made prior to the start of the movement but deviation from these plans is difficult to coordinate during the operation. Coordination of the movement of the infiltrating groups with the division's fires is extremely difficult. Plans must provide for the link-up with other attacking forces.

g. An infiltrating unit may be controlled directly by the division or control can be decentralized to a unit which is operating in the area of infiltration. If the infiltrating unit is under control of division, link-up plans must be made at division level to facilitate this phase. Unity of command requirements normally dictate that at the time of juncture, control of the infiltrating unit pass to the unit linking up.

h. Within the area of infiltration a series of infiltration lanes of sufficient width to permit the infiltrating groups to move by stealth is designated. Infiltration lanes, in conjunction with the coded designation of infiltrating groups and their probable sequence of movement, checkpoints, and phase lines provide a means of reporting the progress of the operation and of coordinating fires with movement of the groups. Other control measures used are attack positions, objectives, and rallying points or areas.

i. Adequate communications must be provided for use within the infiltrating unit and for use between that unit and the controlling headquarters.

j. Infiltrating groups moving on foot generally are limited to hand-carried weapons. Consequently, they must be provided additional fire support from division means. This requires good observation, reliable communications, and a responsive system of obtaining the fires. Although groups traveling by air can carry more and larger weapons, they frequently will also require additional fire support.

k. The combat power organic to infiltrating units is relatively small. Consequently these units are very vulnerable to defeat in detail. Measures are taken to provide early link-up or evacuation of the force.

183. Planning

a. Planning for an attack by infiltration requires the careful integration of the scheme of infiltration with the scheme of maneu-

ver of other attacking elements of the division and with the plan of fire support. Of particular concern is the planning for the control of the infiltrating element and the communications to be employed.

b. Because of the nature of the operation and the hazards encountered during movement, it is essential that maximum dissemination of the plan be made including the action to be taken in the area of decisive action.

c. Suitable recognition signals, both visual and sound, must be provided all units operating in the area of likely link-up to prevent fire fights between friendly elements.

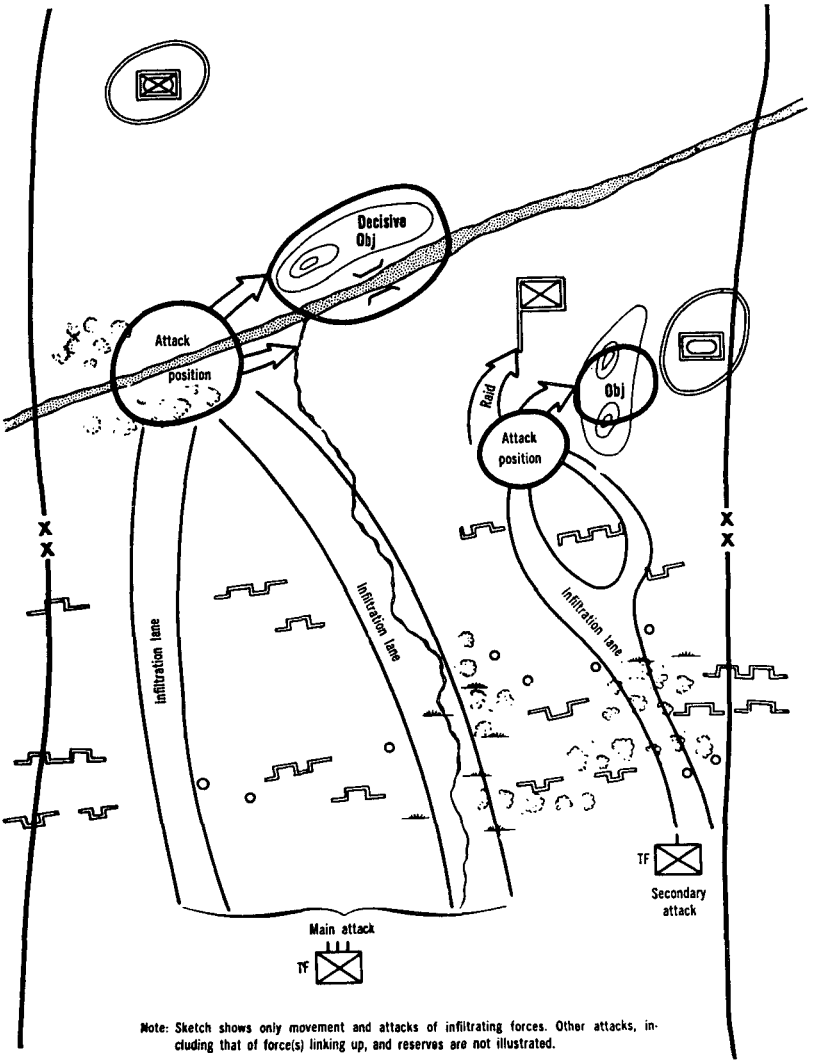


Figure 19. Division attacking by infiltration.

184. Conduct of the Infiltration

a. The infiltrating elements in small groups of half squad or larger pass through the enemy forward defensive positions avoiding detection, where possible, and if detected, avoiding decisive engagement. They move, normally through multiple lanes, to attack positions in the area of decisive action. The passage of the groups through the enemy position and their movement to their attack positions may be accompanied by demonstrations, including preparatory fires, in areas not included in the infiltration. Preparatory type fires may be placed on the enemy positions in the area of infiltration to reduce the enemy's surveillance capability. Infiltrating groups skirt these fires during their movement.

b. Upon arrival in their attack positions, the infiltrating groups form into their attack formations and prepare for decisive action. At a time coordinated with the scheme of maneuver of other elements of the division, the infiltrating force executes its mission and prepares for link-up.

c. Groups which lose direction or are unable to reach the attack position proceed to rallying points or areas. Contingency plans cover their subsequent actions including their evacuation.

d. If airmobile forces are being used for infiltration, the aircraft flying individually or in small groups pass through the enemy forward defensive area. This passage, where possible, is over unoccupied areas and may follow routes which ground patrols have found to be clear of enemy units. During and after movement to the attack position, aircraft simulate landing at other locations as a deception measure. Infiltrating groups may land at various points in the enemy's rear and proceed on foot to the designated attack position. Other aspects of the operation are similar to that of surface infiltration.

e. A widely dispersed enemy, suitable trafficability of terrain, and concealment may enable infiltrating groups to use vehicles during the passage and in subsequent operations. Similarly, infiltrating groups may use small boats and other watercraft. Infiltrating units, having reached the enemy's rear by other means, may equip themselves with vehicles seized from the enemy or commandeered from civilians.

f. Infiltrating forces proceeding to great depths or remaining in the enemy's rear for extended periods require supply which can best be accomplished by airdrop. Maximum use should be made, however, of captured enemy stocks, but the success of the operation must not be jeopardized by sole reliance on the seizure of such stocks.

g. Friendly units bypassed during defensive operations can be used in a manner similar to those which have infiltrated through or over enemy positions.

Section VIII. EXPLOITATION

185. General

a. Exploitation is the following up of gains to take full advantage of success in battle. It is a phase of the offensive that destroys the enemy's ability to reconstitute an organized defense or to withdraw in good order in the face of threatened disaster.

b. Exploitation ranges from that of small local success to the pursuit of large enemy forces. While individual local exploitations may appear insignificant, their cumulative effects may be decisive.

c. The infantry division may exploit its own success, may be the exploiting force for a higher echelon, or may follow and support another exploiting force.

186. Basic Considerations of the Exploitation

a. Exploiting forces may be given the mission of seizing objectives deep in the enemy rear, cutting lines of communications, surrounding and destroying enemy forces, denying escape routes to encircled force, and destroying enemy reserves.

b. Preparation for the exploitation entails prior planning, warning orders, grouping of exploiting forces, provision of administrative support, and establishment of communications.

c. Exploitation is initiated on order or upon reaching prescribed objectives or phase lines. The commander may initiate the exploitation when the enemy situation has deteriorated to a suitable level. Indications of this deterioration include an increase in prisoners captured, an increase in abandoned materiel, and the overrunning of artillery, higher command posts, and signal installations and supply dumps. The transition from the attack to the exploitation may be so gradual as to be hardly distinguishable or it may be abrupt, the latter occurring most frequently when nuclear weapons are used.

d. When nuclear fires are not available or are limited, the exploitation normally occurs following the seizure of the decisive objective. With adequate nuclear support, however, the exploitation may be launched in conjunction with the initial assault or at any time thereafter, dependent upon the effects of the fires and the desires of the commander.

e. Once the exploitation is begun, it is carried out without letup to the seizure of the final objective. The enemy is given no relief from offensive pressure.

f. Decentralized execution is characteristic of the exploitations. However, the commander maintains sufficient control to prevent over-extension of the command and the accompanying risk of defeat in detail. Missions to subordinate commanders are broad. Minimum control measures are used. Administrative support and fire support plans are flexible.

g. Exploiting forces require increased mobility. Army aviation can be used to provide this mobility. Class III consumption rates are high, and provision for rapid resupply of this class of supply is essential. Provisions must be made for engineer support well forward to overcome natural and artificial obstacles. Adequate communications must be provided.

h. In the exploitation, nuclear weapons are used principally on targets of opportunity. These weapons are used to eliminate pockets of resistance, destroy hostile reserves, and seal enemy escape routes. Chemicals are also effective means of blocking defiles.

i. Air Force reconnaissance aviation and Army aviation maintain contact with the enemy, locate enemy movements, and keep the command advised of enemy activities within the zone.

j. Tactical air force aircraft inflict maximum damage by attacking enemy routes especially at defiles, enemy reserves, and withdrawing columns.

187. Conduct of the Exploitation

a. Employment of forces in the exploitation is similar in many respects to the advance to contact (pars. 161–170).

b. Exploiting forces continue the advance in the decisive direction, striving to arrive at their objectives with maximum strength. Commanders are alert to avoid dissipation of forces to achieve minor tactical success or through their units becoming cut off. If a unit is cut off or becomes heavily engaged, the commander decides, in the light of his mission, whether to continue the exploitation, leaving the relief of the force to following and supporting units, or to divert a substantial part of his force for this purpose. Exploiting forces bypass or contain with minimum forces enemy resistance of insufficient strength to jeopardize the accomplishment of the mission.

c. Commanders exploit all means and weapons to overrun enemy forces which cannot be bypassed or contained. Exploitation con-

tinues day and night without regard to weather. Reconnaissance elements, both ground and air, keep commanders informed of enemy action. Rapid advance of exploiting forces reduces their vulnerability to enemy counteraction. Following and supporting troops provide security, reduce bypassed enemy units, expand the zone of exploitation, and support the exploiting force.

d. As enemy demoralization begins and enemy forces disintegrate under pressure, exploitation may develop into pursuit.

188. Following and Supporting Troops in the Exploitation

a. Following and supporting units initially prevent the enemy from closing the gap in a penetration and secure key terrain gained during the penetration or envelopment. As the exploiting force advances they secure lines of communications and supply, support the exploiting units, mop up, destroy bypassed pockets of resistance, expand the area of exploitation from the axis of advance of the exploiting force, and block the movement of enemy reinforcements into the area. Following and supporting units relieve quickly elements of the exploiting force which have been left to block or contain enemy forces or to protect areas or installations. They may assist in the administrative support, civil affairs, and handling of prisoners of war for the exploiting force.

b. Following and supporting units must have adequate mobility to keep up with exploiting forces. They may employ nuclear fires in the accomplishment of their missions. Close liaison is established between commanders of the following and supporting unit and the exploiting force. If unity of command requires, elements of the following and supporting unit may be attached to the exploiting force and vice versa.

189. The Pursuit

a. The pursuit is the ultimate phase of exploitation. It is designed to cut off and annihilate a hostile force which is attempting to escape. It differs from other forms of exploitation in that its primary function is the destruction of the enemy force which is in the process of disengagement. The enemy force itself is the objective.

b. The pursuit consists of direct pressure and encircling forces.

(1) The mission of the direct pressure force is to prevent enemy disengagement and subsequent reconstitution of the defense and to inflict maximum casualties. It does this by attacking constantly, day and night. The enemy is not allowed to break contact. This denies him the opportunity to reorganize and reestablish his defense. Leading elements of the direct pressure forces move

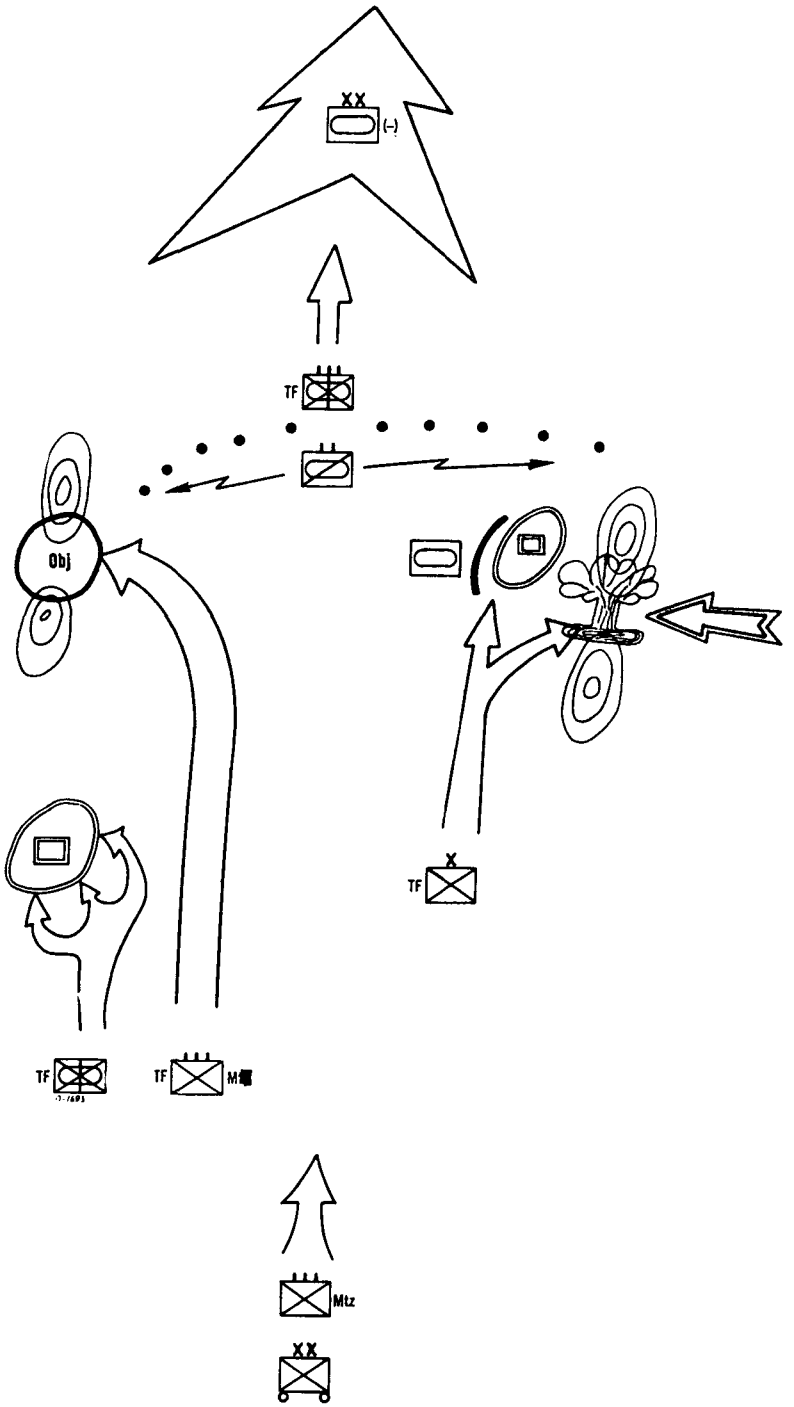


Figure 20. Infantry division following and supporting an armored division.

rapidly along all available roads, containing and bypassing small enemy pockets of resistance. These bypassed forces are reduced by following units. When opportunities are presented, the direct pressure force envelops to cut off and destroy enemy elements, provided such actions do not interfere with its primary mission.

(2) The mission of the encircling force is to get in rear of the enemy and block his escape so that he will be destroyed between the direct pressure and encircling forces. It advances along routes paralleling the enemy's line of retreat to reach defiles, communications centers, bridges, and other key terrain prior to the enemy main force. Airmobile or airborne/air-landed units may be used with great effectiveness as encircling forces. If the encircling force cannot out distance the enemy, it attacks the enemy main body in its flank.

(3) The infantry division may conduct local self-contained pursuits or may be used in the direct pressure of encircling forces of a higher echelon in the pursuit.

190. Basic Considerations of the Pursuit

a. A force in the exploitation is alert to indications of enemy collapse which enable passage into the pursuit. It makes prior preparations including issuance of warning orders, regrouping of forces, and provision for logistical support.

b. When the enemy is having difficulty maintaining the integrity of his defensive posture, the attacker uses all possible means to maintain the continuity of the attack. When the enemy can no longer maintain his positions and seeks to escape, the pursuit is launched. At this time destruction of the enemy force is the primary objective of the attacking forces. Prompt exploitation of heavy nuclear fires may permit employing pursuit forces during the initial assault.

c. Successful pursuit requires constant unrelenting pressure against the enemy to prevent reorganization and preparation of defenses. This requires that troops and equipment be pushed to the limit of their endurance. Aggressive leadership and exercise of initiative at all levels are essential. Commanders are located well forward to maintain the impetus of the advance. They are justified in taking greater risks to achieve decisive results.

d. When the infantry division conducts local pursuit operations, distribution of forces requires that the direct pressure force be of sufficient size and composition to be able to maintain continuous

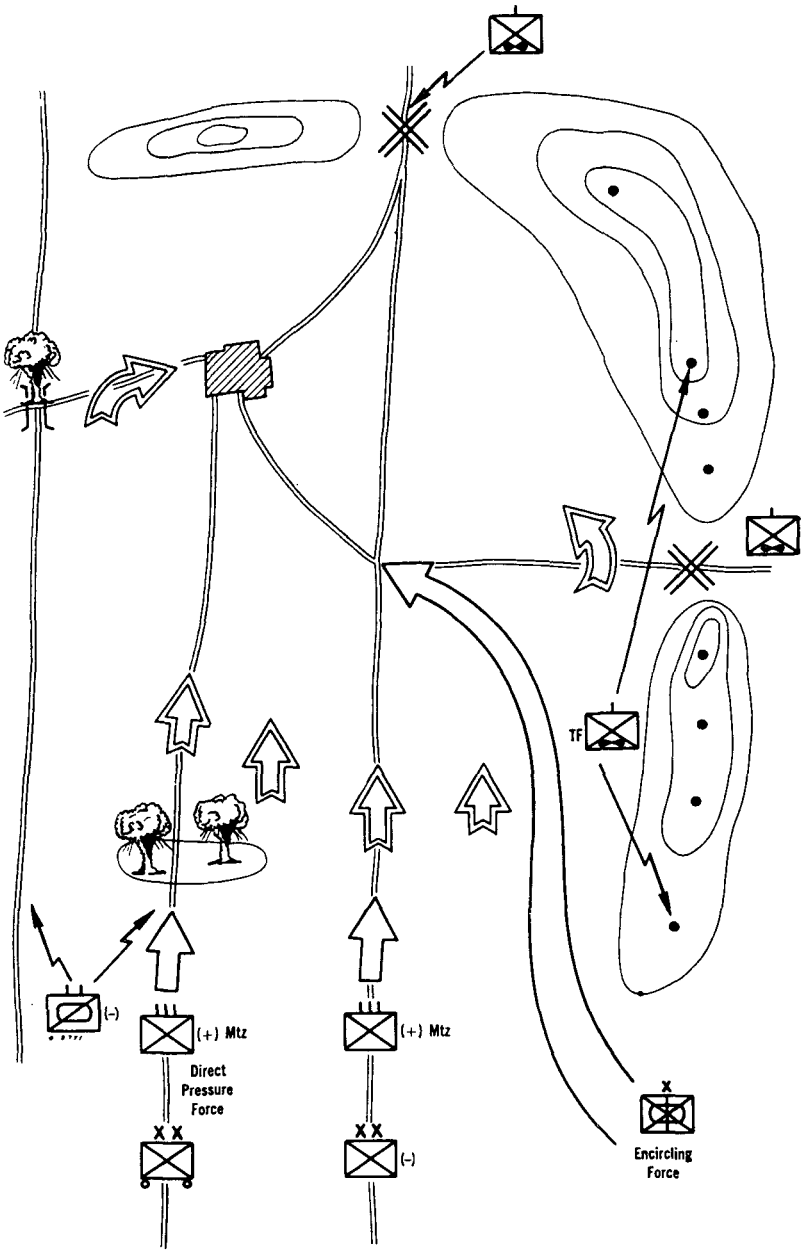


Figure 21. Division conducting a pursuit.

pressure, night and day, to prevent disengagement or reorganization of the defense. The encircling force must have mobility at least equal to the enemy and be self-contained for a semi-independent operation. The enemy's inability to react effectively reduces the need for mutual support. Engineer units are required in both

forces to clear the zones of obstacles and facilitate rapid movement of advancing columns.

e. The infantry division normally requires additional mobility for pursuit operations. This is particularly true when it is the encircling force or when it is following and supporting another division in this role.

f. Adequate preparation must be made for logistical support. Class III consumption is particularly high. Air transportation may be used to provide prompt delivery of supplies to forward units. Maximum use is made of captured enemy materiel, particularly transportation, and stocks of supplies.

g. Security is enhanced by the speed of advance, the enemy's inability to react effectively, and the dispersion of forces.

191. Conduct of the Pursuit

a. The pursuit is conducted on as broad a front as possible. Forces engaged in direct pressure and encircling maneuvers are assigned deep objectives, broad missions, and minimum control measures. Maximum latitude is given subordinate commanders for exercise of their initiative. Decentralization of fire support and administrative means is often necessary.

b. Direct pressure forces advance relentlessly while the encircling force cuts the enemy's lines of retreat. Double envelopment of the retreating main force or its elements is accomplished when conditions permit. Hostile rear guards or forces on flank positions are not permitted to divert the main force from the decisive direction. Airmobile units are used to envelop enemy rear guards expediting their destruction and speed the movement of the force. If the enemy's main force establishes itself on a position from which it cannot be quickly dislodged, the commander immediately attacks, using forces as they become available supported by all means including nuclear fires.

c. If the attempt to cut the enemy's escape routes fails, a new encircling force is immediately dispatched.

d. Every available agency of terror and destruction is used to convert the shaken morale of a defeated enemy into panic.

Section IX. NIGHT COMBAT

192. General

a. Night combat is an integral part of all operations. Movement, attack, exploitation, and defense at night are not special

operations. They are but routine functions of battle. There are, however, certain aspects and considerations of night combat which must be recognized during the planning and execution of operations at night. These revolve generally around the increased difficulty of control resulting from reduced visibility.

b. Night combat which achieves surprise may offer opportunities for success when daylight operations are impracticable. Continuous pressure applied day and night, particularly against a weakening enemy, hastens decision. Relentless exploitation around the clock denies the enemy time for regaining his composure and speeds his destruction.

c. Troop movements, concentration of forces prior to the attack, and conduct of an attack which are impossible during daylight may be executed in darkness with minimum risk to our forces.

d. Very hazy or rainy weather, fog, falling snow, and smoke produce conditions similar to darkness.

193. Basic Considerations of Night Combat

a. Night combat is characterized by a decrease in the effectiveness of aimed fire and a corresponding increase in the importance of close combat and supporting fires planned in daylight.

b. Morale of troops both friendly and enemy is highly sensitive to physical and psychological factors. Reverses and failures at night generally affect troops more than the same reverses or failures would in daylight. Well-trained troops, confident of their ability to fight at night, can use these psychological factors in their favor to gain greater surprise, and thus achieve exceptional successes.

c. Darkness increases difficulty of movement, troop leading, maintenance of direction, cohesion, and control. The time required to execute movements and emplace weapons is greater at night than in daylight. Simple schemes of maneuver with well-defined objectives and routes facilitate control. Leaders must be aggressive and well forward in attacking echelons. Full use is made of navigational aids to assist in maintenance of direction.

d. Subordinate commanders must have adequate time for reconnaissance. Preferably they should be able to observe terrain over which their units will move during daylight, nautical twilight, and darkness to fix terrain features which will aid maintenance of direction.

e. Coordination of nuclear fires with maneuver at night is difficult. Darkness increases troop safety considerations because of the increase effects of dazzle and the loss of night adaptation.

Obstacles created by nuclear fires are more difficult to traverse at night. Nuclear fires may destroy landmarks which were to be used as control measures.

f. Enemy use of nuclear weapons may affect the vision of attacking or defending troops rendering them ineffective for appreciable periods (par. 194*d*).

g. All tactical and tactical support units can be used at night. The effectiveness of armor is increased by the use of illumination including tank-mounted searchlights. Illumination also assists in the adjustment of artillery fire.

h. Illumination by diffused lighting in rear areas assists in troop movements, logistical operations, and the operation of supporting weapons.

194. The Night Attack

a. General.

(1) The same considerations of planning, preparation, and conduct apply to attacks at night as those during daylight. The same forms of maneuver may be used. Dependent upon means available, objectives may be as bold and decisive as in daylight. Night attack plans, however, are usually less flexible than those of daylight attacks.

(2) The division attacks at night to continue an attack started in daylight, to achieve surprise and psychological superiority, to gain important terrain for further operations, to use concealment afforded by darkness in order to avoid heavy losses, to exploit, and to compensate for friendly air and armor inferiority.

(3) Success at night depends upon well-trained, confident troops, sound and aggressive leadership by small unit commanders, adequate daylight reconnaissance, and efficient control measures. Control by higher commanders is difficult to maintain at night. Hence small unit commanders must act independently in the absence of orders. Control at night requires more restrictive measures than during daylight.

b. Planning.

(1) The procedures involved in planning attacks at night are the same as for daylight attacks. Items are listed below for emphasis.

(2) The decision to make a night attack must be made sufficiently in advance to provide time for reconnaissance,

detailed planning, and coordination. The use of warning and fragmentary orders and concurrent planning is habitual. Successful attacks can be made at night on an impromptu basis, but the risk of failure is greater. Attacks in progress are not discontinued merely because of nightfall. Subordinate units in the attack habitually plan to continue the attack throughout the night unless ordered otherwise.

(3) The concept for the night attack must be simple and planned in detail. The scheme of maneuver, fire support plan, and control measures are carefully specified.

(4) Attacks to seize and hold an objective are usually launched during early darkness. This enables the attacker to take advantage of the longer period of darkness to reorganize and prepare the objective for defense. If the attack is to seize favorable terrain for a succeeding daylight attack, it is usually launched during the final hours of darkness to give the enemy minimum time in which to interfere with the subsequent attack. Attacks may be initiated during darkness and continued without pause during daylight. The attack is frequently commenced to give the attacker sufficient time on the objective to organize the objective to resist counterattack and to prepare to continue the attack at daylight.

(5) Secrecy is stressed during preparations for the attack. Reconnaissance, noise, and light are carefully controlled. Deception measures include sounds to cover movement forward of armored vehicles.

(6) When possible, night attacks are made with fresh troops. However, the paramount consideration is that the attacking troops be as familiar as possible with the terrain over which they will attack.

(7) If conditions permit, a rehearsal of the attack is conducted over similar terrain and under similar conditions of light.

c. *Coordination and Control.*

(1) Highly restrictive control measures are used to obviate collisions between attacking units. As a minimum, objectives, a line of departure, boundaries, and phase lines are used. Directions of attack are frequently assigned.

(2) Deep objectives require that a series of limited objectives be assigned to assaulting units to facilitate control. Battlefield illuminations assists in movement and control. It

may enable a command to seize deeper objectives than otherwise possible.

(3) A phrase line is used to establish a limit of advance beyond which attacking troops will not proceed unless specifically instructed. The limit of advance provides for the control of maneuver elements, troop safety of attacking units, and freedom for artillery and other fire means to attack targets beyond that line.

(4) Provisions are made for indicating direction by firing tracers or by other improvisations.

(5) Provisions are made for mutual identification of troops.

d. Battlefield Illumination.

(1) The use of battlefield illumination facilities coordination and control and increases the effectiveness of aimed and observed fires. It may, however, be of some assistance to the enemy and cause reduction in surprise. Its use must be carefully coordinated to avoid detrimental effects in adjacent areas.

(2) Searchlights, illuminating shells, and aerial flares are the principal means of illuminating the battlefield. The decision to employ illumination depends upon—

(*a*) *Natural light conditions.*

(*b*) *Availability of means.*

(*c*) *Surprise.* The surprise which accompanies a nonilluminated attack may produce greater results than the beneficial effects of illumination. Prior patterns of friendly illumination may have a decided influence on surprise.

(*d*) *Enemy's use of illumination.* If the enemy frequently employs illumination, its use by the attacker will offset advantages which would otherwise accrue to the enemy.

(*e*) *Coordination and control.* Insufficient time for reconnaissance, continuation of a daylight attack, deep objectives, and difficult terrain influence the use of illumination. Cross-country movement is accelerated thus providing for the rapid exploitation of nuclear fires.

(3) Searchlights in a direct role can be used to dazzle enemy observers and gunners.

(4) If the attack is to be nonilluminated, plans for on-call illumination are habitually prepared. Such action facilitates its employment in the event of enemy use of nuclear weapons, loss of surprise, and other contingencies.

(5) Terrain, vegetation, structures, weather and atmospheric conditions, and the vulnerability of illuminating means to enemy countermeasures are technical considerations in the selection of means to be used and the method of their employment. See FM 20–60 for details of employment.

e. Fire Support.

(1) In determining whether a preparation will be fired, its probable effects on maneuver must be weighed against the effect of greater surprise stemming from an attack by stealth. If a preparation is not fired, on-call fires are planned to neutralize preparatory type targets in the event surprise is lost.

(2) In addition to normal fires, fires are planned to cover the withdrawal of the attacking force and to box in the area of the attack.

(3) Normally on-call nuclear fires are not used because of the difficulty of achieving troop safety to protect troops from dazzle and loss of night adaptation.

(4) Smoke is used to reduce the effectiveness of enemy use of illumination.

f. Conduct of the Attack.

(1) Simple formations are used at all echelons. In small units, column formations are held as long as possible and deployment occurs at the last possible moment. Each attacking unit is given a definite direction and objective. Contact is maintained between columns and every precaution is taken to prevent their collision.

(2) Enemy sentinels and listening posts are quietly and rapidly silenced by small detachments of the attacking forces. Infiltrators may, at a time coordinated with the main attack, attack command installations and communications to increase enemy reaction time. Attacks on enemy reserves and fire support means further confuse his efforts.

(3) Leaders are well forward to insure rapid aggressive movement of their units, maintenance of direction, avoidance of collision, and coordination with other units and fire support.

(4) The division reserve is located where it is available to exploit success, replace a unit in the attack, or cover a withdrawal. At night, the reserve is committed only in

an area where the possibility of collision with friendly troops is remote or when illumination is used.

Section X. RECONNAISSANCE IN FORCE

195. General

a. The reconnaissance in force is an attack to discover and test the enemy's position and strength. Although its primary aim is reconnaissance, it may discover weaknesses in the enemy dispositions which, if promptly exploited, may achieve tactical success without commensurate cost.

b. When the availability of nuclear weapons permits, the principal efforts of the division may be a widespread and continuous reconnaissance in force. Under these conditions the reconnaissance in force locates forms or lures enemy forces into remunerative nuclear targets and holds them in this configuration until nuclear fires can be brought to bear. The maneuver elements then complete their destruction. The division's reserve is held ready to replace or relieve maneuver elements or to exploit decisively opportunities which may develop.

196. Basic Considerations

a. The reconnaissance in force normally develops information rapidly and in detail. Other reconnaissance methods can develop the same information but require an appreciably longer period of time. In arriving at a decision to reconnoiter in force, the commander considers the—

(1) Extent of his present knowledge of the enemy situation and the urgency and importance of the additional information sought.

(2) Efficiency and speed of other collection agencies.

(3) Extent to which his plan of action may be divulged by the reconnaissance in force.

(4) Risk that the reconnoitering force may be defeated and the possibility that the reconnaissance may lead to a general engagement under unfavorable conditions.

b. When information is sought regarding a particular area, the reconnaissance in force is planned and executed as an attack with a limited objective. If the enemy situation along a front is to be developed, the reconnaissance in force is a phased advance under mission type orders, employing strong aggressive probes to determine the enemy situation at critical points.

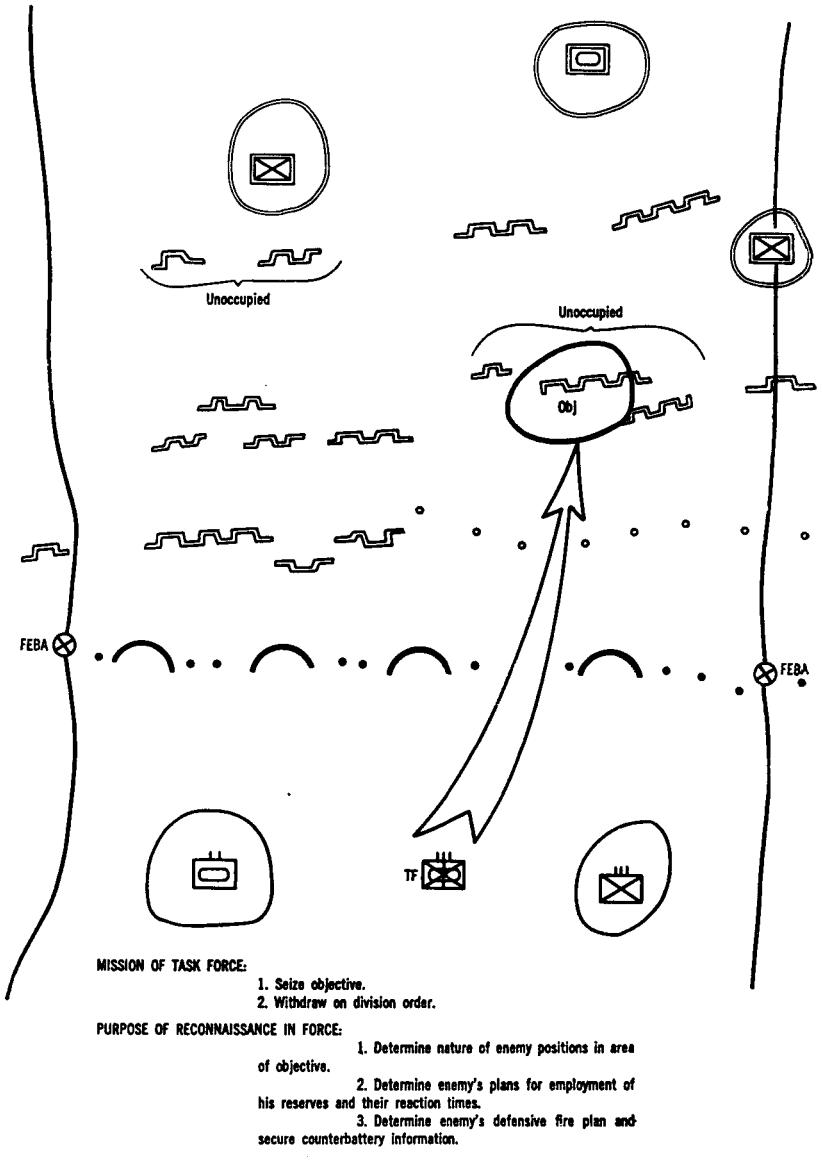


Figure 22. Division conducting a reconnaissance in force.

c. The reconnoitering force must be of size and composition to cause the enemy to react strongly and definitely to the attack, thus disclosing his locations, dispositions, strength, planned fires and planned use of reserves. The size of the force depends upon the mission of the division and the situation. The division commander may use a force as small as a task force built around a battle group or battalion or he may use the bulk of the division, retaining sufficient reserves to exploit enemy weaknesses.

d. The division may use several reconnaissances in force staggered in time and at widely separated points. Such action keeps the enemy off balance, discloses his dispositions over a broad area, and may develop the location and planned use of his reserve. Multiple reconnaissances in force are favored by operations on a wide front, friendly superiority in armor and mobility, and an enemy who is inexperienced or weak in control and communications.

197. Organization for Combat

Normally a task force is formed to execute the reconnaissance. Units comprising it should have mobility, communications and command facilities, and sufficient combat power to uncover main enemy positions. It should include infantry, armor, and engineers. Artillery of mixed calibers should be included in the task force or placed in support of it.

198. Conduct of the Reconnaissance in Force

a. The reconnaissance in force is conducted in a manner similar to other attacks. Restrictions stated or implied, however, are placed upon the commander of the force to avoid decisive battle or actions which might precipitate a general engagement.

b. The division commander is alert to exploit success gained by the reconnaissance in force. Such actions include continuation of the attack or retention of terrain seized by the force. Suitable targets discovered by the force are attacked by nuclear weapons, and their destruction is completed by local exploitation by the reconnoitering force.

c. The division commander is prepared to assist in the extrication of the force if it becomes heavily engaged. Nuclear weapons may be an expeditious means of doing this.

d. Upon completion of its reconnaissance, the force may remain in contact with the enemy or it may withdraw. If the reconnaissance is the preclude to further attack, other units pass through the reconnoitering force in the attack or it may itself continue the attack.

CHAPTER 7
DEFENSE

Section I. GENERAL

199. Objective

Defensive operations are planned and conducted to employ all available means and methods to prevent, resist, repel, or destroy an enemy attack.

200. Purpose

a. The infantry division undertakes defensive operations when ordered to do so by higher headquarters, when forced to do so by enemy action, or voluntarily. The purpose of a defensive operation may be to:

(1) Develop more favorable conditions for offensive action.
(2) Economize forces in one area in order to apply decisive force elsewhere.
(3) Trap a hostile force.
(4) Reduce the enemy capability for offensive action.
(5) Deny the enemy entry into an area.

b. Destruction of the enemy is an inherent mission in all defensive operations.

Section II. FUNDAMENTALS OF DEFENSE

201. General

The division plan for the organization and conduct of the defense is based upon certain fundamentals which apply to any form of defensive operation. These are—

a. Proper Utilization of Terrain. The commander adopts a plan which takes advantage of the natural defensive strength of the terrain.

(1) *Key terrain.* The division retains control of those terrain features which provide for essential observation and communications as well as those required for the maneuver of reserves. The division also denies the enemy the use

of terrain from which he can jeopardize the success of the defense.

(2) *Observation and fields of fire.* Combat power is enhanced when forces are committed on terrain which affords good observation and fields of fire. Good observation and fields of fire facilitate long range engagement of the enemy. Plans are made to deny enemy use of terrain which affords him observation into the defended area, or to obscure his observation therefrom by the use of smoke or other measures if he succeeds in securing that terrain.

(3) *Cover and concealment.* Every effort is made to conceal the location of prepared defensive localities, control facilities, fire support means, reserve elements, and administrative installations. Units are shifted during periods of poor visibility to avoid the danger of detection inherent in the prolonged occupation of the same area. Covered and concealed routes are selected for the movement of reserves and for administrative support. Covered routes of withdrawal are especially important for security forces and for elements conducting delaying actions. Terrain to which the enemy has access is analyzed to determine covered areas and routes which may be useful to him in conducting his attack.

(4) *Obstacles.* Defense plans use obstacles to destroy the tactical cohesion of the enemy's attack, to hold him under fire and to divert his forces into areas of the defender's own choosing. Natural obstacles are improved to the extent required or permitted by the situation. Obstacles are covered by observation and firepower. The area of operations is analyzed to determine the influence of obstacles on friendly maneuver. This analysis influences such issues as the general defensive scheme, the location of the division security forces, and the positioning of the reserve.

(5) *Avenues of approach.* The defender considers the avenues of approach available to the enemy which will accommodate decisive enemy forces. An evaluation of the avenues of approach which lead to the defensive area will assist the defender in visualizing how the enemy may approach the division area and conduct his assault against the division's defenses. Such a visualization influences the divisions plans for deployment of surveillance means, for fire planning, and for employment of security forces. An evaluation of avenues of approach

into the defensive area in conjunction with key terrain enables the defender to determine the appropriate employment of combat power in order to create the strongest defense possible. The defender also considers the avenues of approach to be used in his own offensive maneuver.

b. All-Around Defense. The division, as a whole, and each of its subordinate elements prepare to defend against attack from any direction. All-around defense is achieved through the careful initial disposition of forces, their planned redisposition as the battle develops and by detailed planning of fires.

c. Mutual Support. The defense is planned to preclude defeat in detail of any major subordinate unit. Mutual support is achieved through the exchange of fires between adjacent units, the maneuver of armor, cavalry and infantry elements, and/or the shifting and massing of artillery fires.

d. Defense in Depth. The division organizes a defense in depth to preserve the integrity of the defense and to deny the enemy free maneuver in rear areas. Shallow defenses are extremely vulnerable to disruption as a result of nuclear fires, attack by armored units, large scale infiltration, and vertical envelopment. It is particularly important that key terrain be defended in depth. Defense in depth is achieved through appropriate initial disposition of forces and the careful selection and preparation of additional positions to which forces can be moved as the need arises. Fires are planned throughout the depth of the defensive area.

e. Security. Commanders at all levels take the steps necessary to avoid tactical surprise. The principal measures taken in the infantry division are the establishment of general outpost and combat outposts, the posting of local security elements, aerial and ground surveillance to cover the division area and the approaches thereto.

f. Flexibility. The defensive plan provides for flexibility which will permit the commander to shift his combat power appropriately as the enemy attack develops. Such flexibility is attained by withholding a reserve, by exploiting the ability of artillery to shift and mass fires, and by providing adequate mobility for tactical elements.

g. Maximum Use of Offensive Action.

(1) The defender seeks to seize and retain the initiative by careful selection of the area of battle, by forcing the enemy to react in conformity with the defensive plan,

and by exploiting enemy weakness and error. Although defensive operations may sometimes be imposed by circumstances beyond his control, the commander, particularly under fluid nuclear battlefield conditions, may also deliberately undertake defensive operations for the express purpose of destroying an enemy force.

(2) Under nuclear conditions the distinction between offensive and defensive operations is often slight. The deliberate shift from offense to defense may occur rapidly and with considerable frequency. A defensive operation usually is a composite of major and minor actions and engagements. Thus, during a given operation, elements of the division may be holding on position, delaying, or attacking while others are feinting, or delivering fires as part of the overall defensive plan.

(3) An offensive attitude is essential to seize opportunities to destroy the enemy. Psychological preparation of troops and strong leadership in the defense are necessary to maintain morale, alertness, and an overall aggressive attitude. Troops are indoctrinated that an effective defense offers the opportunity to destroy the enemy.

h. Dispersion. In a nuclear environment, or in a situation where the threat of use of nuclear weapons is present, units are deployed in a manner which limits their vulnerability to enemy nuclear attack. On the other hand, while minimum vulnerability is desirable, accomplishment of the division mission remains paramount.

202. Integration of Defensive Measures

The division achieves maximum defensive strength through the careful integration and coordination of all defensive measures. As examples—

a. Offensive maneuver and the operation of forces committed to the retention of specific terrain are planned to complement each other.

b. Fire plans of all units are closely coordinated. Fires are planned to assist offensive maneuver, to support organized defensive localities, to control unoccupied areas, and to cover barriers.

c. The division barrier plan integrates the requirements of higher commanders. It is designed to accommodate planned maneuver, including the movement of reserves. When properly employed; barriers and obstacles substantially increase the effectiveness of forces engaged in defensive operations.

Section III. FORMS OF DEFENSE

203. Mobile and Area Defense

a. Mobile Defense. The mobile defense is that form wherein minimum combat power is committed in the forward defense area to warn of impending attack, canalize the enemy into less favorable terrain, and otherwise impede, harass, and disorganize him. The bulk of the division's combat power is retained in reserved, positioned for offensive action. The mobile defense permits the defender to reduce his own vulnerability to nuclear attack and at the same time creates opportunities for destroying the attacking force by the skillful combination of maneuver and fires. Set patterns of action are avoided. The defending commander must retain freedom of action which will permit him to select the decisive time and place to launch his counterattack. The mobile defense requires that the defending force have mobility comparable or superior to that of the enemy.

b. Area Defense.

(1) The term "area defense" is used to describe an operation which requires the retention of specific terrain. The commander conducting an area defense places primary reliance upon fires and upon forces deployed on position to stop and repulse the attacker. Under nuclear conditions, however, a defending force may not be physically located on key terrain prior to the enemy attack. In any event, the commander conducting the defense employs sufficient forces in the forward area to create the combat power necessary to dominate the terrain to be held. In the area defense the forward area normally has a higher priority for forces than does the reserve. The reserve is employed to block and destroy the enemy, to eliminate penetrations if they occur, or to reinforce threatened areas. The defensive concept requires detailed fire plans, careful organization of the area to exploit the natural defensive strength of the terrain, and detailed and thorough plans for the maneuver of the reserve.

(2) The area defense normally takes maximum advantage of existing obstacles, reduces the danger of night attack or attack by infiltration, and forces the attacker to employ maximum combat power in order to effect a penetration.

(3) Troops conducting an area defense are often quite vulnerable to nuclear attack. Thus, this form of defense is more suitable in a nonnuclear environment or during a low level scale of use of nuclear weapons. If the area

defense becomes necessary in a nuclear environment, caution is exercised to insure that units are positioned to minimize their vulnerability to nuclear fires.

204. Variation in Defensive Operations

The area defense and the mobile defense lie at opposite ends of a scale of wide variations in the form of defensive operations. Frequently, neither of these basic forms of defense will be suitable exclusively for use in a given situation and mission. In such cases the responsible commander must develop a defense which incorporates the applicable portions of each.

205. Factors Influencing a Choice of Forms of Defense

The decision concerning the form of defense to be adopted in a specific situation is governed by the following factors:

a. Mission. The form of defense to be adopted may be prescribed or required by the mission assigned by higher headquarters. Wherever possible this decision should be left to the commander of the unit charged with the conduct of the defense. If the mission requires that certain terrain be held or that the enemy be denied entry into a specific area, an area defense is indicated. If the defensive battle can be fought in depth, a mobile defense may be appropriate.

b. Terrain. Terrain which restricts enemy maneuver or the movement of our own reserves and thus affords strong natural defensive areas may favor the adoption of an area defense. Conversely, terrain which facilitates maneuver favors the adoption of the mobile defense.

c. Mobility. The relative mobility between the defender and the opposing forces exercises a strong influence upon the defensive plan. Inferior tactical mobility militates against the adoption of the mobile defense and favors an area defense. In evaluating mobility the commander considers the means available to him, the effects of weather and terrain, and estimated enemy capabilities including the air situation.

d. Nuclear Situation. The availability of nuclear weapons may influence the defensive plan.

(1) *Friendly capabilities.* Nuclear weapons enhance the importance of offensive maneuver as an element of the defense. In general, nuclear weapons tend to increase the size of the area which the division can control. Similarly, the allocation of nuclear weapons to a subordinate element of the division greatly increases that unit's defensive capability.

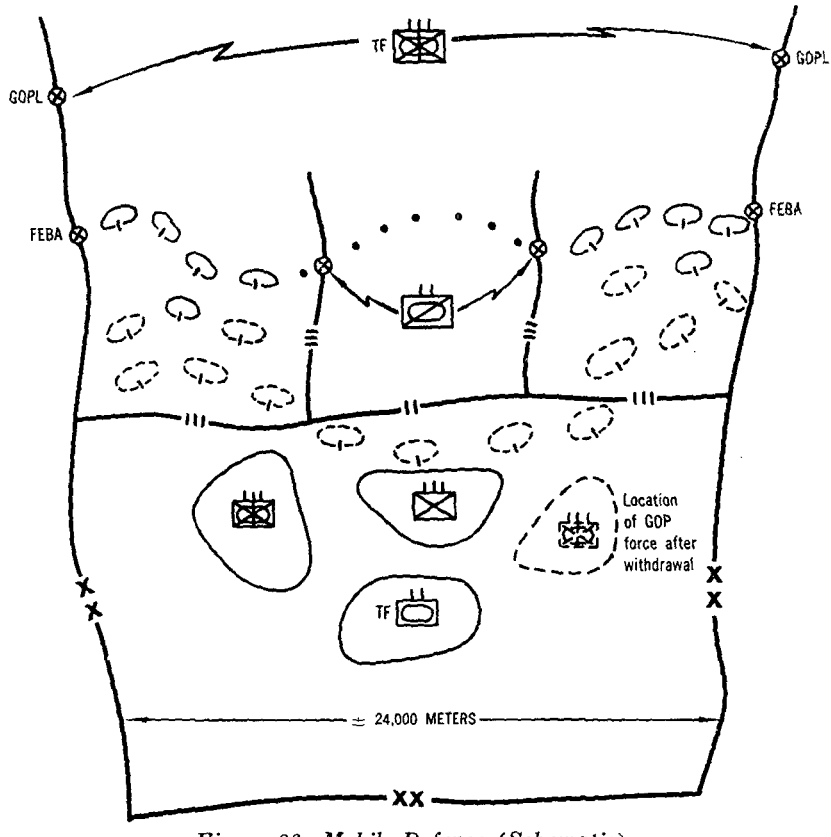


Figure 23. Mobile Defense (Schematic).

(2) *Enemy capabilities.* When the enemy possesses a nuclear capability, the division seeks protection in the dispersion and mobility of its units. As the enemy nuclear capability increases, the defensive plans tend more toward decentralized action in which the division relies less on planned large scale counterattacks and more on the maneuver of highly mobile, combined arms forces of company size, supported by nuclear weapons.

e. Time. The time available for the planning of the defense, deployment in the defensive area, and organization of the ground is an important consideration. The time element may influence any or all of the following features of the defensive plan:

(1) Composition and location of the security force.

(2) Composition and location of forces in the forward defensive area.

(3) Composition and location of reserves.

(4) Organization for combat.

(5) Barrier plan.
(6) Use of offensive action.

206. Schematic Deployments

Figures 23 and 24 are schematic example of the mobile and area defense. Many other deployments are possible. Stereotyped formations and deployments are avoided.

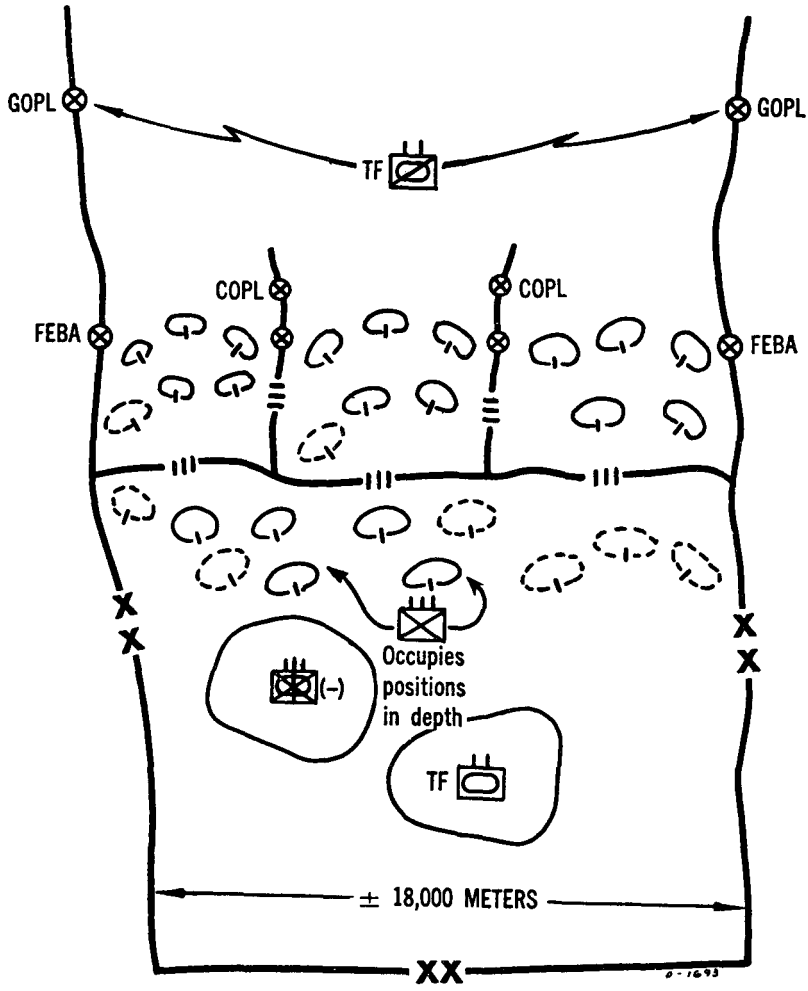


Figure 24. Area Defense (Schematic).

Section IV. ECHELONS OF THE DEFENSE

207. General

The defense consists of three echelons—the security zone, the forward defense area, and the reserve. Combat power is allocated

to these echelons in accordance with the defensive plan. The general scheme of maneuver or defensive organization of each echelon is prescribed in sufficient detail to permit intelligent execution of the defense.

208. Security Zone

a. General. The security zone begins at the forward edge of the battle area and extends into enemy territory to the depth to which security elements are employed. Any or all of the following security elements may operate in the security zone.

(1) Air Force reconnaissance flights.
(2) Higher headquarters army aerial surveillance means.
(3) The corps covering force.
(4) The division general outpost.
(5) Division aerial surveillance means.
(6) Combat outposts and patrols of the units located in the division forward defense area.

b. Higher Headquarters Security Elements. Operations of security elements of higher headquarters forward of the division area are controlled and coordinated by the appropriate higher headquarters. When a corps covering force is employed, the division general outpost maintains contact and liaison with that force.

c. Division General Outpost.

(1) The missions of the general outpost are to warn of the enemy's approach, to delay and disrupt the enemy, to deceive him as to the defensive plan, and to destroy the enemy. Elements of the general outpost may be designated as stay-behind parties to collect intelligence information and to direct fires.
(2) The composition of the general outpost varies according to its mission, the area of operations, relative combat power of opposing forces, and enemy capabilities. It is normally a combined arms force. Its mobility is at least equal to, and should be superior to, that of the enemy.
(3) The general outpost accomplishes its mission by observation and fires at relatively long ranges; by aggressive patrolling and reconnaissance; by delaying action and deception measures; and, when necessary, by engaging in close combat. In general, it seeks to avoid decisive engagement.

d. Division Aerial Surveillance. The division extends its surveillance to the maximum distance permitted by the means available.

Enemy units, once located, are kept under surveillance as long as they threaten the accomplishment of the division's mission.

e. Combat Outpost. The combat outpost is a security element of the battle group. It is located to provide timely warning of the enemy's approach and to deny the enemy close ground observation and direct fires into the forward defense area. Its location permits support by fire from within the battle group. The division commander prescribes location of combat outposts to the extent necessary to insure the provision of continuous security across the division front.

f. Modifications. It is desirable to establish all echelons of security. However, there will be times, particularly under nuclear conditions, when the division area of security responsibility is increased to such an extent that it may be necessary to omit either the general outpost or the combat outpost. Under such conditions a careful estimate must be made to insure that the unit's defensive capability is not depleted through the employment of too large a security force and/or too many patrols.

g. Other Security Measures. All units provide their own local security. Unoccupied portions of the defensive area are kept under surveillance by visual, photographic, and electronic means. Both airmobile and ground reconnaissance and security elements are employed. Surveillance is coordinated at division level to insure complete and continuous coverage. Flank and rear area security requirements must also be considered in developing the overall division security effort.

209. Forward Defense Area

a. General. The division forward defense area is the area extending from the forward edge of the battle area (FEBA) to the rear boundaries of the forward committed units.

b. Allocation of Combat Power.

(1) In the area defense, the bulk of the division's combat power is committed to hold the ground. Since it is impossible to develop an absolutely impregnable defense, a reserve is required.

(2) The forces allocated to the forward defense area in a mobile defense must be capable of forcing the enemy to deploy. They require long-range fire support and a mobility equal to, or greater than, that of the enemy.

210. The Reserve

The reserve is the primary means by which the defender regains the initiative. Retention of a relatively large reserve, consistent

with the requirement for forces in other echelons, permits offensive actions both behind and forward of the FEBA. In the mobile defense, the reserve is the decisive element of the division. Although it may be required to perform defensive actions, the primary mission of the reserve is to destroy the enemy by offensive action. The combat power allocated the reserve includes fires as well as maneuver elements. The availability of nuclear fires greatly increases the offensive capabilities of the reserve.

Section V. PLANNING THE DEFENSE

211. Analysis of the Mission

a. The development of a defensive plan requires a careful analysis of the assigned mission to determine the stated, implied, and deduced tasks which must be accomplished.

b. The assigned mission will normally include—

(1) Who—the designation of forces to accomplish the mission.

(2) What—the nature of the defensive operation.

(3) When—the time the operation is to begin.

(4) Where—the general area in which the operation will be conducted. (Normally indicated by the use of boundaries and limiting points.)

(5) Why—the purpose of the operation (as applicable.)

c. The assigned mission or the higher commander's concept of operation may also contain other requirement or restrictions which affect the division plan.

Examples are:

(1) The minimum force to be employed in the division security echelon.

(2) The extent to which the division may permit penetrations to develop before counterattacking.

(3) Specific terrain that must be held or areas that must be denied to the enemy.

(4) Specific conditions under which nuclear weapons may or may not be employed.

(5) The intended use of reserves by higher headquarters.

d. The assigned mission and the concept of the higher commander are examined considering the factors listed in paragraph 205 to determine the form of defense, or variation thereof, which will be adopted by the division. After this analysis, the division commander issues his planning guidances to his staff.

212. Development of a Defensive Course of Action

a. General. Based upon the commander's planning guidance, the division staff develops and evaluates courses of action to accomplish the division mission. A defensive course of action allocates appropriate combat power to each echelon of the defense and provides for its employment in a manner which will accomplish the mission. Development of such a course of action requires a series of tentative determinations as outlined in *b* below. While these are normally considered in the order listed, the sequence may vary when dictated by the situation. In any event, the considerations involved are interdependent and each must be evaluated in the light of its impact on the others.

b. Considerations in Developing a Defensive Course of Action.

(1) *Determine the nature of the resistance desired on each major avenue of approach into the defensive area.* This determination is governed primarily by the terrain and the form of defense being considered. In the area defense, emphasis is placed upon blocking avenues of approach at the forward edge of the battle area and in depth in order to hold terrain. In the mobile defense, resistance on major avenues of approach varies from holding specific terrain to delaying action or planned local withdrawal. Emphasis is placed upon creating a favorable condition for decisive counterattack by the division reserve. On each avenue of approach, terrain is selected which if held, or covered by delaying forces, or controlled by fire will provide the degree of resistance envisioned and also insure freedom of action to the reserve. The latter requirement normally entails a visualization of the maximum enemy penetration that can be accepted on each avenue of approach before the division counterattacks.

(2) *Determine the combat power to be employed in the forward defense area.*

(*a*) Sufficient combat power is allocated to each avenue of approach into the forward defense area to accomplish the resistance envisioned by the course of action. The requirements for forces and fires are considered concurrently.

(*b*) Forces are allocated to the forward defense area based upon a visualization of the units required to hold terrain and/or to execute the required delay. As one technique, the G3 visualizes the number of company size units required in the forward defense area. From

this visualization, he determines the number of major subordinate units required and selects tentative lateral and rear boundaries.

(*c*) Firepowers is allocated to the forward defense area to support maneuver units and to cover areas to be controlled by fire alone.

(*d*) During the estimate process, barriers, antiarmor, antiairborne, antiguerrilla, and air defense requirements are considered to the extent that they impact upon a choice among opposing courses of action.

(3) *Allocation of combat power to, and location of, the reserve.*

(*a*) Allocation of combat power to the reserve is governed principally by its role in the defense. In the area defense, the reserve ensures the continuity of the defense by counterattacking to destroy enemy penetrations, by reinforcing forward elements or by executing blocking missions. In the mobile defense, the reserve is the principal element of the defense. In this form of defense the bulk of the division's combat power is held in reserve to execute the decisive offensive maneuver.

(*b*) The positioning of the reserve is governed primarily by its planned employment in offensive action. Regardless of the form of defense adopted, the reserve is positioned so that it is capable of—

1. Rapid counterattack in seriously threatened key areas.

2. Blocking enemy penetrations and providing depth to the division defense.

3. Providing security for the rear area.

4. Attaining the dispersion required to reduce its nuclear vulnerability.

5. Securing maximum cover and concealment.

6. Shifting from position to position in order to avoid being located by enemy target acquisition means.

(4) *Allocation of combat power to, and the location of, the general outpost.*

(*a*) The allocation of combat power to the general outpost is determined by the size of the division area of responsibility, the defensive strength of the terrain therein, the number of major avenues of approach which lead to the forward defense area, and the extent to which delay, disruption, and destruction is to be imposed by the general outpost upon the enemy.

(*b*) The location of the general outpost may be prescribed

by the next higher headquarters or it may be selected by the division. In either case, the general outpost is normally located between 8,000 and 16,000 meters forward of the FEBA and its location should meet the following criteria:

1. Provide good, long range observation and fields of fire over the avenues of approach to the forward defense area.
2. Take advantage of natural obstacles.
3. Be far enough forward to deny the enemy ground observation of and ability to deliver light artillery fire into the forward defense area.
4. Be close enough to the defensive area to preclude destruction of the general outpost.
5. Provide concealed positions and adequate routes of withdrawal.

(5) *Refinement of the course of action.* As the course of action is developed, conflicts may arise as the requirements of the various defensive echelons compete for the available combat power. In this event, initial determinations of areas of responsibility and allocation of combat power are adjusted accordingly.

213. Continuation of the Estimate of the Situation

a. Staff estimates of the situation develop and evaluate all courses of action which are feasible for the accomplishment of the defensive mission. These estimates ultimately result in the selection of a course of action which the staff recommends to the commander for adoption.

b. After considering the estimates of his staff officers, the commander completes his own estimate of the situation and announces his decision and his concept of operations. The commander's decision sets forth his selected course of action. His concept of operation amplifies his intentions concerning the conduct of the defense.

c. Once the decision and concept of operations have been announced, the staff begins the detailed planning which is embodied in the division operation and administrative orders. Such planning includes—

(1) Development of specific missions for and the assignment of areas of responsibility to subordinate units.
(2) Development of the organization for combat.
(3) Development of plans for division counterattacks or other offensive maneuver.

(4) Development of detailed fire support, barrier, antiarmor, antiairborne, antiguerrilla, and air defense plans.

(5) Development of normal supporting plans such as aerial surveillance, army aviation, communications, and administrative support.

214. Control Measures

a. Boundaries. The division commander defines the areas of responsibility of subordinate elements by designating boundaries. Both lateral and rear boundaries are normally assigned in the defense. The forward extension of a lateral boundary marks the foremost limit of territorial responsibility. The area assigned to subordinate units includes sufficient room for observation, defense in depth, maneuver, and dispersion of supporting elements. Subordinate units are not assigned responsibility for areas larger than they can control. In establishing boundaries, responsibility for each major avenue of approach is specially assigned to a particular commander. When necessary, additional units may be attached to other units, in order to provide sufficient combat power to control a wide avenue of approach. See chapter 4 for a discussion of boundaries in connection with the coordination of fires and observation.

b. Limiting Points. Limiting points are designated on lateral boundaries to coordinate the fires, positioning of units, and the maneuver of adjacent forces. Limiting points for the general outpost normally are designated by the corps commander. The division commander may recommand their location. Limiting points for the combat outpost are designated by the division commander, based in part on the recommendation of the battle group commanders who have been assigned areas of responsibility in the forward defense area. Similarly, the division commander prescribed limiting points on battle group boundaries to designate the forward edge of the battle area.

c. Other Measures. The control measures discussed in chapter 6, are also applicable to the offensive operations of the division defensive plan.

215. Organization for Combat

a. Forward Defensive Forces. Forces in the forward defense area consist principally of infantry battle groups. Rifle companies may be shifted between battle groups to provide the optimum allocation of combat power for each defensive task. One or more tank companies of the division armor battalion may be attached to battle groups in the forward defense area, to enhance

their counterattack capabilities or to reinforce the antitank defenses along armor approaches. The cavalry squadron may be employed in the forward defense area in a delaying role or in an economy of force role. The squadron may be reinforced with armor, with infantry, or with both. Tactical transportation is attached to units in the forward defense area as required by the situation.

b. The Reserve. The reserve may consist of one or more battle groups, the armor battalion or elements thereof, nuclear weapons and other appropriate support elements. Artillery units are not held in reserve. The reserve is given the greatest possible degree of mobility. Depending upon its size, composition, location, and the plans for employment the division commander may place the reserve under a designated subordinate or retain personal command thereof. The brigade commander frequently commands the entire reserve.

c. The General Outpost. The general outpost normally consists of elements which revert to reserve upon completion of the security mission. Tactical and tactical support units comprising the general outpost are attached to the general outpost force. When required, the brigade commander may command the general outpost force.

216. Fire Planning

a. Nuclear and nonnuclear fires constitute an important element of the combat power available to the division. These fires are planned to produce the greatest possible effect throughout the defensive area. Fires are also planned to engage the enemy at extreme ranges and keep him under continuous fire as he approaches the forward defense area. Fires are planned to support offensive maneuver to destroy the enemy if he penetrates the defensive area. Persistent or nonpersistent chemical agents may be used to increase the effectiveness of fires when authorized.

b. The details of fire planning are discussed in chapter 4.

217. Barrier Planning

a. Barriers are integrated into the defensive scheme to hold the enemy under fire or divert him into areas where he can be destroyed by fires and offensive maneuver. The barrier plan is designed to take maximum advantage of natural obstacles. Barrier plans are developed concurrently with other plans such as antitank and fire plans and are carefully coordinated with counterattack plans.

b. The barrier plan specifies the location and nature of barriers,

assigns responsibility for construction, and specifies the priority of construction.

c. The barrier plan includes—

(1) Applicable portions of the plans of higher headquarters, including pertinent portions of denial plans.

(2) The designation of barriers vital to the command.

(3) The assignment of barrier tasks and priorities to subordinate units.

(4) The location of minefields of major tactical importance, and the type and extent of contamination, if any.

(5) Gaps and lanes required for planned maneuver.

(6) Schedule for the preparation and execution of demolitions. Responsibility for preparation and execution, and any necessary restrictions on the use of demolitions are clearly stated.

(7) Allocation of engineer support, labor, materials, equipment and transportation.

(8) Any restrictions on the use of particluar types of obstacles.

(9) Safeguards for the security of the plan and its execution.

(10) Reporting instructions.

d. The effectiveness of obstacles is increased when they are covered by observation and fire.

e. When their use is authorized, persistent agents are used to contaminate barriers, obstacles, and defiles as an additional aid in impeding enemy movement and canalizing his advance.

f. Normally, the complete barrier plan is not permitted to be carried forward of the division command post. Instructions to subordinate elements are issued as fragmentary orders.

218. Defense Against Armor

a. Antitank defenses are planned to cover those avenues of armor approach presenting the greatest threat to the command.

b. Armor is attacked most effectively when in assembly areas. Therefore, early detection of tank units is essential. Warning systems are established to insure that antitank weapons can be brought to bear on enemy armor and destroy it outside the area of friendly troops dispositions.

c. Maximum use is made of natural obstacles and antitank minefields to facilitate the destruction of enemy armor by canalizing it into the fields of fire of antitank weapons. All antitank weapons

systems including individual antitank weapons, mines, tanks, artillery, and nuclear weapons are used. The antitank defense is established in depth throughout the defended area. Artillery fires, including chemicals, may be used on tanks to destroy the crews and separate or destroy accompanying infantry.

d. If enemy armor succeeds in overrunning forward areas, antitank weapons located in depth seek to stop further advance. Forces in the forward areas remain in position to prevent enemy infantry from accompanying its armor as well as to contribute to the destruction of the penetrating tanks. Reserve forces heavy in armor are then committed to destroy the penetration.

219. Defense Against Airmobile Attack

The division prepares to defend itself against airmobile attacks. Such attacks normally occur in conjuction with ground assaults. Maximum effort is made to destroy airmobile forces while they are still airborne. Observation is established over likely air routes of approach and landing areas. Surveillance and warning procedures are established to detect and counter airmobile assaults under all conditions of visibility. Small, highly mobile, infantry-tank teams are effective against the assaulting forces during the early phase of their landings.

220. Air Defense

The division receives protection against air attack from the field army air defense system and also takes active and passive measures of its own.

a. A forward area air defense battalion may be attached to the division for local air defense purposes. The protection of nuclear delivery means, the division reserve and the routes necessary for the movement of the reserve, recieve high priority in the assignment of missions to this battalion.

b. Elements of the division take advantage of natural cover and concealment and camouflage as protection against air attack. To the extent possible, troop movements are confined to periods of reduced visibility.

221. Defense Against Infiltration

Increase dispersion of units in the forward defense area enhances enemy capability for infiltration. The division employs patrols, warning devices, ground surveillance equipment, and aerial observation to detect enemy presence in the gaps between occupied areas. These measures are coordinated by division head-

quarters to insure full and continuous coverage. Infiltrating forces are destroyed by fire and local offensive action.

222. Rear Area Security

A discussion of rear area security measures is included in chapter 5.

Section VI. OFFENSIVE MANEUVER IN THE DEFENSE

223. General

Offensive maneuver may be the principal means by which the division accomplishes its defensive purpose. Offensive maneuver by combat elements in the defense includes the spoiling attack and the counterattack. Offensive operations are undertaken to exploit the results of attack by friendly nuclear weapons, to destroy a penetrating force at a time and place of the defender's choosing, to strike the enemy when he is unprepared and thus achieve decisive results, and to assist in disengaging another element of the division.

224. Spoiling Attack and Counterattack

a. Spoiling Attack.

(1) A spoiling attack is an offensive operation launched against enemy forces outside (normally forward of) the defended area. Its purpose may be to destroy a portion of the enemy force, to throw the enemy off balance, to seize terrain from which to launch an attack, or to deny the enemy ground observation and surveillance of the defended area. Its successful execution requires a high degree of mobility and firepower.

(2) The spoiling attack is conducted when there is a high assurance of success. No reasonable opportunity is overlooked to destroy the enemy before he closes on the forward defensive area. However, the decision to launch a spoiling attack must be carefully weighed to determine its impact upon the subsequent conduct of the defense.

(3) Contingency plans for spoiling attacks are prepared as appropriate to the situation. The procedures for planning the spoiling attack consider the fundamentals set forth in chapter 6.

b. Counterattack.

(1) *General.* The counterattack is a basic element of the defense. Its function varies in accordance with the form

of defense being conducted. Although there are occasions wherein the counterattack is made by fire alone, more decisive results usually accrue from a combination of fire and maneuver. Plans for the defense include counterattack plans in all key areas wherein they are likely to be required.

(2) *Area defense.* In the area defense the function of the counterattack is to destroy or eject the penetrating force and thus regain control of the forward defense area.

(3) *Mobile defense.* In the mobile defense the counterattack is the decisive element by which the commander accomplishes his mission. The objective is the destruction of the enemy force and the creation of an opportunity for further offensive action.

(4) *Fundamentals of the counterattack.*

(*a*) *Timing.* The counterattack achieves its greatest success if launched when the enemy attack has been slowed or halted and while the enemy is engaged in consolidating his gains and reorganizing his forces. The counterattack is launched before the enemy strength in the penetration becomes too great to be defeated.

(*b*) *Speed and violence.* The counterattack is launched with speed, violence, and surprise to exploit the confusion already present among attacking enemy elements. Prior to the counterattack, the division commander determines that portion of the reserve that is needed to accomplish the counterattack mission. Once this determination has been made and the counterattack ordered, the counterattack commander executes a coordinated attack. Piecemeal commitment of units is avoided. Whenever possible, the counterattacking force is highly mobile and strong in armor.

(*c*) *Fire support.* The counterattacking force is assigned priority of fires. Nuclear fires are specially important in the reduction of hostile penetrations. With nuclear fire support, highly mobile, company-size tank-infantry forces can achieve major successes in a counterattack role.

(*d*) *Unity of command.* All elements in position to assist the counterattack do so. The efforts of these elements are directed and controlled to provide unity of effort

in the counterattack. Unity of effort is achieved through one or more of the following:

1. Direct command by the division commander.
2. Attachment of units in the area of the penetration to the counterattacking force.
3. Placing of the counterattack force under one control headquarters. (Use of the brigade headquarters to control the counterattack is shown in fig. 25.)
4. Adjustment of boundaries to facilitate the counterattack.

(5) *Counterattack plans.* A separate plan is prepared for each likely enemy penetration. These plans are prepared in detail and must be coordinated with other portions of the defensive plan. The basis for each counterattack plan is an assumed enemy penetration which the counterattack is designed to reduce. The limits of the assumed penetration represent the maximum encroachment which the enemy can be permitted to make prior to the time the counterattack strikes him. As a minimum, a counterattack plan includes the following:

(*a*) A visualized enemy penetration.

(*b*) Appropriate assumptions such as the size of the enemy force in the penetration and the capabilities of friendly forces in the area of assumed penetration.

(*c*) A scheme of maneuver to include—

1. *Objective.* Normally a terrain objective is assigned. It is selected so that its seizure will achieve the purpose of the counterattack and facilitate future action.
2. *Direction of attack.* A direction of attack is assigned which will promote unity of effort and lead to the destruction of enemy forces in the penetration. It is generally desirable that the counterattack be directed against the base of the penetration, where the enemy is weakest. However, when nuclear fires are employed, it may be more advantageous to attack the penetration elsewhere.
3. *Time of attack.* Consideration must be given to the time required to deliver nuclear fires in support of the counterattack, make an indirect damage assessment, and to move the counterattacking force to the line of departure.
4. *Line of departure.* Alternative lines of departure may be selected. At the time of execution, the line designated is the one which best suits the situation.

(*d*) A fire support plan. Targets for nuclear and nonnuclear fires are integrated into the plan. Firing data are prepared in advance. The plan includes measures for troop safety.

(*e*) Measures for insuring unity of effort.

(6) *Rehearsal.* Counterattack plans are rehearsed as thoroughly as time and security permit. Every effort is made to insure appropriate reconnaissance and rehearsal by key participating personnel. Troop participation to the maximum extent practicable is highly desirable. Night rehearsals are conducted as required.

(7) *Execution.* When the decision to counterattack is made, that plan which best fits the existing situation is ordered executed with necessary modification.

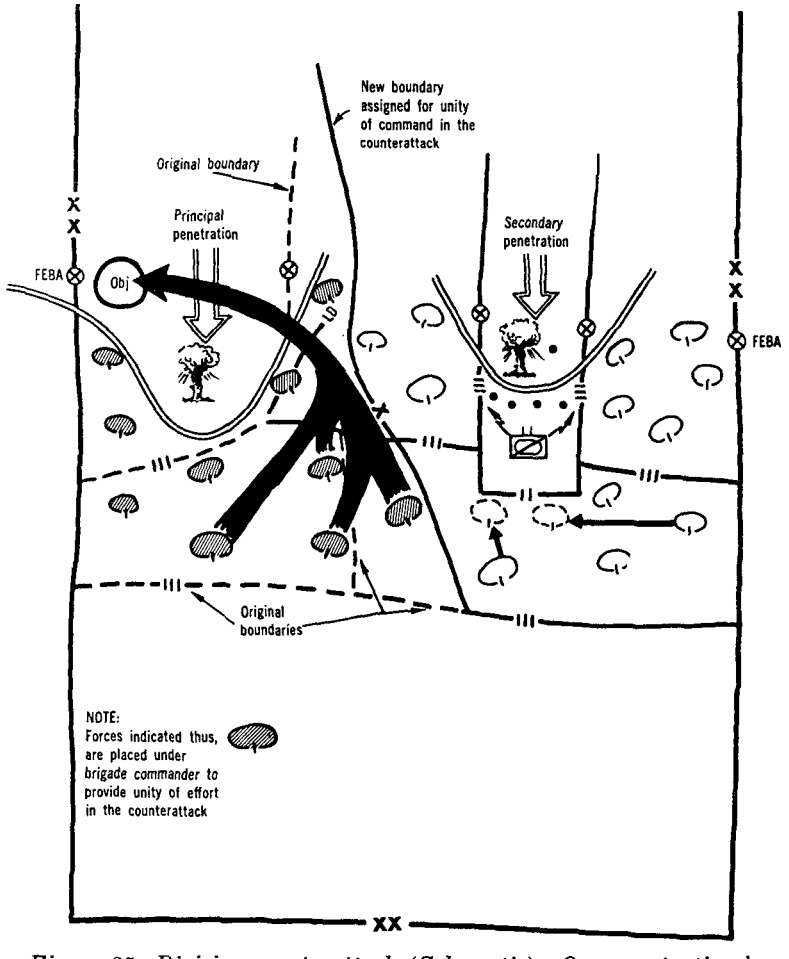


Figure 25. Division counterattack (Schematic). One penetration is counterattacked while the other is contained.

(8) *Reconstitution of the reserve.* Plans for the employment of the reserve and plans for the establishment of a new reserve are prepared concurrently. As soon as possible after commitment of the reserve, the division commander constitutes the new reserve, using support elements and other combat elements as they become available. When all division resources are committed, the division commander must rely on higher headquarters to provide a reserve.

Section VII. CONDUCT OF THE DEFENSE

225. General

a. A continuous, aggressive, intelligence collection effort, including the use of air and guerrillas, is essential in determining the probable strength, composition, direction, and time of the enemy attack.

b. The mission of units occupying a position may vary from one of delay to deliberate defense at all costs. Combat units employed in defensive positions accomplish their mission by destroying the enemy with fires and maneuver or by impeding his advance to such an extent that he can be destroyed by the reserve. Close combat units participating in the defense may shift rapidly from defensive to offensive operations.

c. Unless deception is an essential element of the defense, the attacking enemy forces are taken under fire as early as possible by long-range fires. As the enemy advances, he is taken under fire by elements in the security zone. Security forces warn, deceive, develop intelligence, and seek to execute maximum disruption and delay without becoming decisively engaged. They attempt to inflict maximum casualties on the advancing enemy and force him to deploy. Security elements may remain in the area after passage by the enemy as a means of collecting target information.

d. The enemy's disposition forward of the defensive area may favor a spoiling attack. When considering such an attack, the commander evaluates the risks involved in terms of their effects upon the accomplishment of his overall mission.

e. As the enemy approaches the forward defense area, he is taken under fire by all available weapons. Previously selected target areas are kept under close surveillance.

226. Mobile and Area Defense

a. Mobile Defense. In the conduct of the mobile defense, the

units in the forward defense, area conduct their portion of the action essentially as delaying action. Such operations may extend over considerable depth within the defensive area. The forward elements, however, are prepared to stop on short notice and hold terrain to assist the execution of the decisive counterattack. Criteria for determining when the counterattack should be launched are essentially the same as for any offensive maneuver. Among the significant considerations involved are the degree to which the forward area forces have succeeded in weakening the attacker and their remaining potential for further reducing his effectiveness. It is usually desirable that the enemy be stopped, or at least slowed down, and disorganized before the counterattack is launched. However, these considerations should not be regarded as requirements and should not inhibit initiative in launching the counterattack.

(1) The counterattacking capability is not dissipated against minor enemy success. When the counterattack is launched, it is given the means necessary to accomplish the mission. Piecemeal commitment of the counterattacking force jeapardizes the success of the entire operation. The counterattack is carried out rapidly and violently, employing all the combat power necessary to insure success.

(2) Upon occasion it may be necessary to launch separate counterattacks against two or more enemy pentrations. Whenever possible, such enemy penetrations should be attacked successively and in order of the seriousness of their threat. Simultaneous counterattacks by elements of the reserve tends to dissipate the combat power of the reserve and should be avoided.

(3) Although plans for the counterattack are prepared well in advance, the counterattack in many cases will of necessity be launched under conditions other than those planned. The probability of success is the controlling factor in determining when to counterattack.

b. Area Defense. In the conduct of the area defense, forces in the forward defense area are organized to halt the enemy, or if the enemy penetrates the area, to canalize and delay him and force him into areas favoring counterattack. The counterattack is the principal means for eliminating the penetration, and restoring the integrity of the forward defense area. Considerations involved in selecting the exact time and place for the counterattack are similar to those which apply to the mobile defense.

CHAPTER 8
RETROGRADE

Section I. GENERAL

227. Types

a. A retrograde operation is a planned movement to the rear or away from the enemy. Such an operation may be forced by enemy action or it may be made voluntarily. In either event, a retrograde operation must be approved by the higher commander. A poorly planned or disorganized retograde operation invites disaster.

b. Retrograde operations are classified as delaying action, withdrawal, and retirement. A major command may engage in a combination of these operations either simultaneously or sequentially as one form develops into another.

228. Purpose

Retrograde movements are conducted to accomplish one or more of the following purposes:

a. To harass, exhaust, inflict punishment upon, and delay the enemy.

b. To draw the enemy into an unfavorable situation.

c. To permit employment of the command or elements thereof elsewhere.

d. To avoid combat under unfavorable conditions.

e. To gain time and avoid fighting a decisive engagement.

f. To disengage from battle.

g. To conform to the dispositions of other friendly troops.

Section II. DELAYING ACTION

229. General

A delaying action is an operation in which a unit trades space for time while inflicting maximum punishment upon the enemy without itself becoming heavily engaged in combat. This is the type action normally fought by covering and/or security forces

and by forces in the forward echelon in the mobile defense. The integration of delaying action into the mobile defense is covered in paragraph 226*a*.

230. Basic Considerations

a. Weather and Terrain. A small force, properly using the terrain, can frequently cause considerable delay and inflict serious punishment upon a much larger force. Plans provide for maximum use of natural obstacles (rivers, swamps, passes, and other defiles). Artificial obstacles are created by mines, atomic and conventional demolitions, CB agents, and nuclear weapons. Cover and concealment are required to reduce the enemy's ability to detect movement by visual, photographic, or electronic devices. Cross-country movements are used to the maximum extent practicable to increase dispersion and reduce vulnerability. Weather is given careful consideration because of its effects upon trafficability, observation, efficiency of personnel and equipment, and the employment of nuclear and CB weapons.

b. Nuclear Weapons. Nuclear weapons provide the delaying force with a capability to inflict heavy losses on the enemy and thus destroy his attack capability. Nuclear fires may also be used to assist in extricating heavily engaged forces. In general, targets selected for nuclear attack are those which have an immediate effect upon the overall division mission.

c. Mobility. As a minimum, the delaying force should possess mobility equal to that of the enemy; all available means are exploited to gain superior mobility. An airmobile capability is especially valuable in the conduct of delaying action. In the absence of desired transportation, the foot mobility of the soldier is exploited.

d. Communications and Control. Communications and control are often difficult to maintain during a delaying action, principally because of the normal dispersion of forces engaged in such operations. The commander prepares detailed plans and insures that subordinate commanders fully understand his concept of operations so that, in the absence of specific orders or in the event of an unforeseen situation, subordinates can employ their commands in a manner which will still achieve unity of effort.

e. Air Situation. Local command of the air is of major importance, since delaying action normally is carried out against relatively superior enemy ground forces. Visual observation by Army aircraft greatly assists in the conduct of delaying actions. Without local command of the air, the delaying force relies upon speed, deception, cover and concealment, and passive protective measures.

f. Administrative Support. Primary emphasis is on successful evacuation of supply and equipment. That which cannot be evacuated is destroyed. Strict supply discipline is enforced. Minimum supply levels are maintained on position to support current operations.

g. Leadership. Commanders at all echelons demonstrate personal, aggressive leadership to maintain the offensive spirit within units. The fact that a delaying action is a planned military operation with a positive purpose is conveyed to all troops.

231. Major Variations of Delaying Action

a. General. The division accomplishes its assigned mission by delay on single position, delay on successive positions, delay on alternate positions, or continuous delay. The following basic considerations govern the selection of one of these variations:

(1) The amount of delay which must be achieved.
(2) The amount of terrain which can be given up.
(3) The availability of suitable delaying positions.
(4) The relative mobility of friendly and enemy forces.
(5) The estimated enemy nuclear capability.

b. Delay on a Single Position. This is a defensive operation which has the characteristics of a linear variation of the area defense. Conditions which indicates delay on a single position are—

(1) The delay which must be achieved is relatively short.
(2) The amount of terrain which can be given up is relatively small.
(3) The division has little or no advantage in relative mobility.
(4) The enemy possesses little or no nuclear capability.

c. Delay on Successive Positions. Conditions which indicate delay on successive positions are as follows:

(1) Delay for a prolonged period is required.
(2) A relatively large amount of terrain can be given up.
(3) A series of suitable delaying positions is available.
(4) The division has an advantage in mobility.
(5) The enemy poses a nuclear threat.

d. Delay on Alternate Positions. The conditions which indicate delay on successive positions also apply to delay on alternate positions. An additional condition is a division zone narrow enough

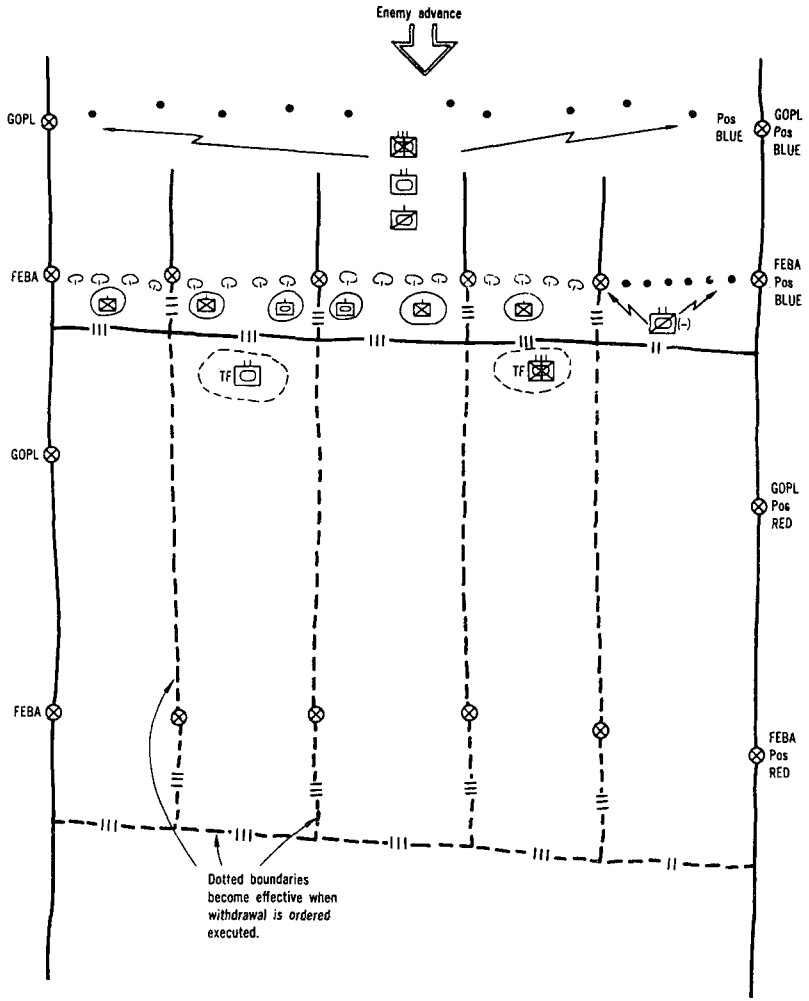


Figure 26. Delay on successive positions—first position (schematic only).

to permit the deployment of adequate combat power on two positions simultaneously.

e. Continuous Delay. When the division has a marked superiority in mobility it may fight a continuous delaying action. In close terrain organic transportation frequently provides the necessary margin of mobility. In open terrain the division requires augmentation with armor and additional transportation.

232. Planning

a. Major Decisions. Having decided to conduct a delaying action, the commander is immediately faced with two major decisions:

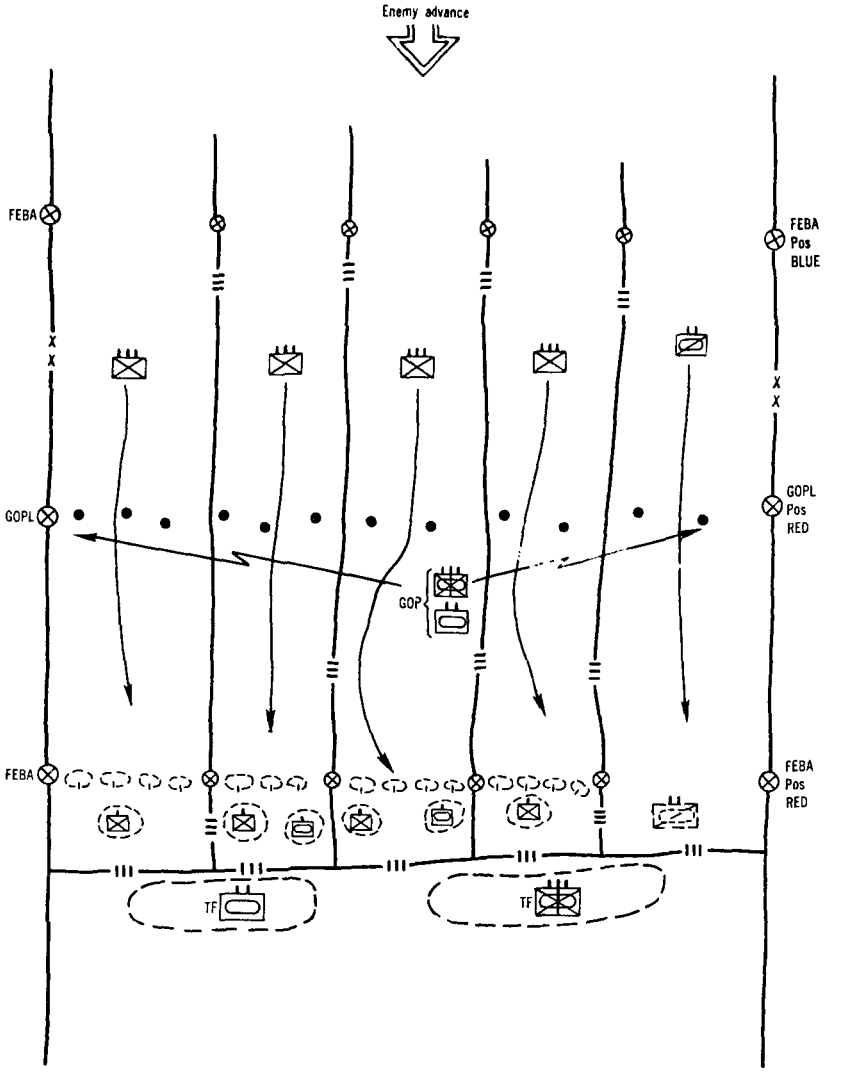


Figure 27. Delay on successive positions. With GOP in place, forces in forward defensive area withdraw to next rearward position (schematic only).

the selection of the position or positions on which the division will deploy; and, the delay to be achieved on each.

(1) Selection of position(s). A good delaying position has these characteristics—long-range observation; good fields of fire; natural obstacles to front and flanks; covered routes of withdrawal and, few good avenues of approach from the direction of the enemy. Successive positions should be far enough apart to force the enemy to regroup

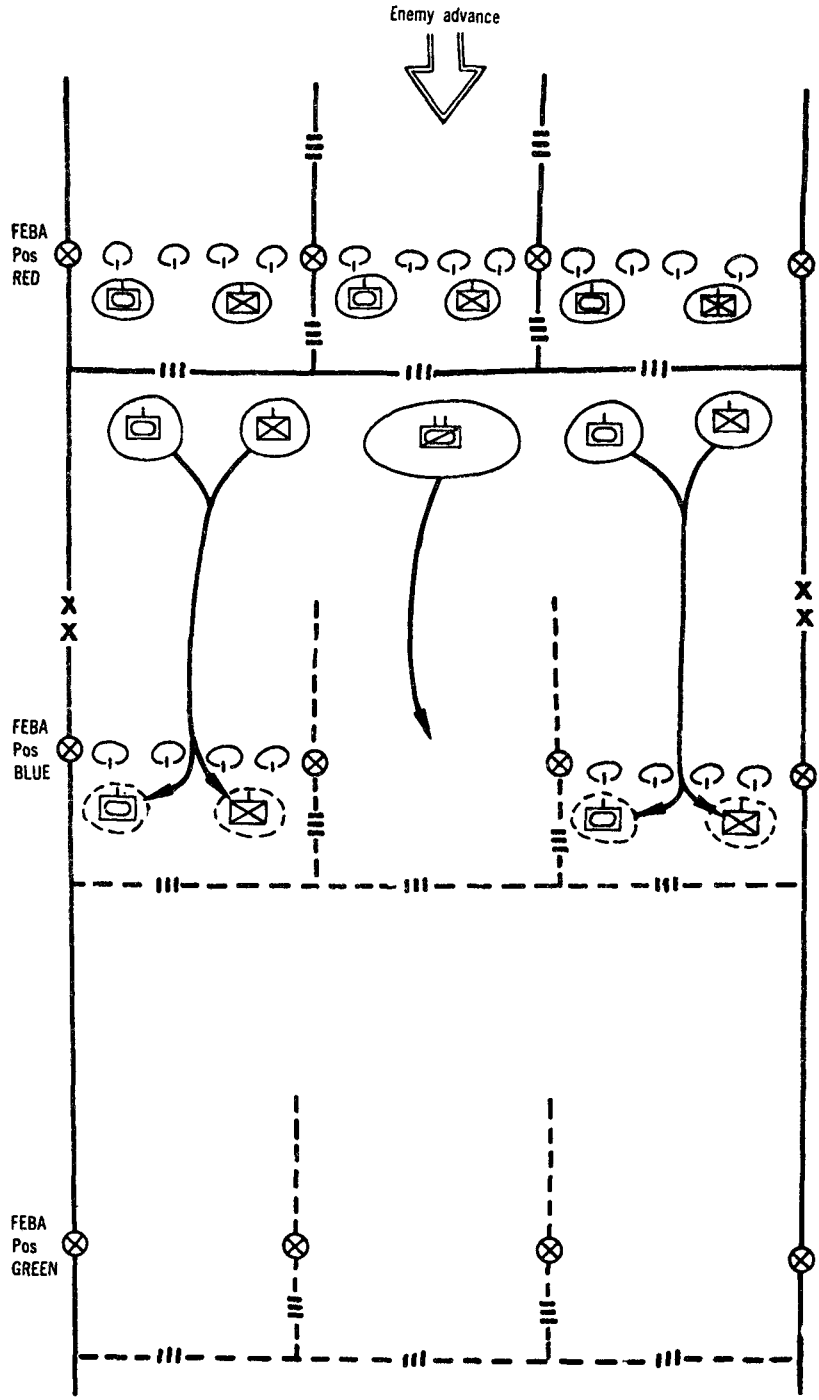


Figure 28. Delay on alternating positions—division reserve completes occupation of second delaying position (schematic only).

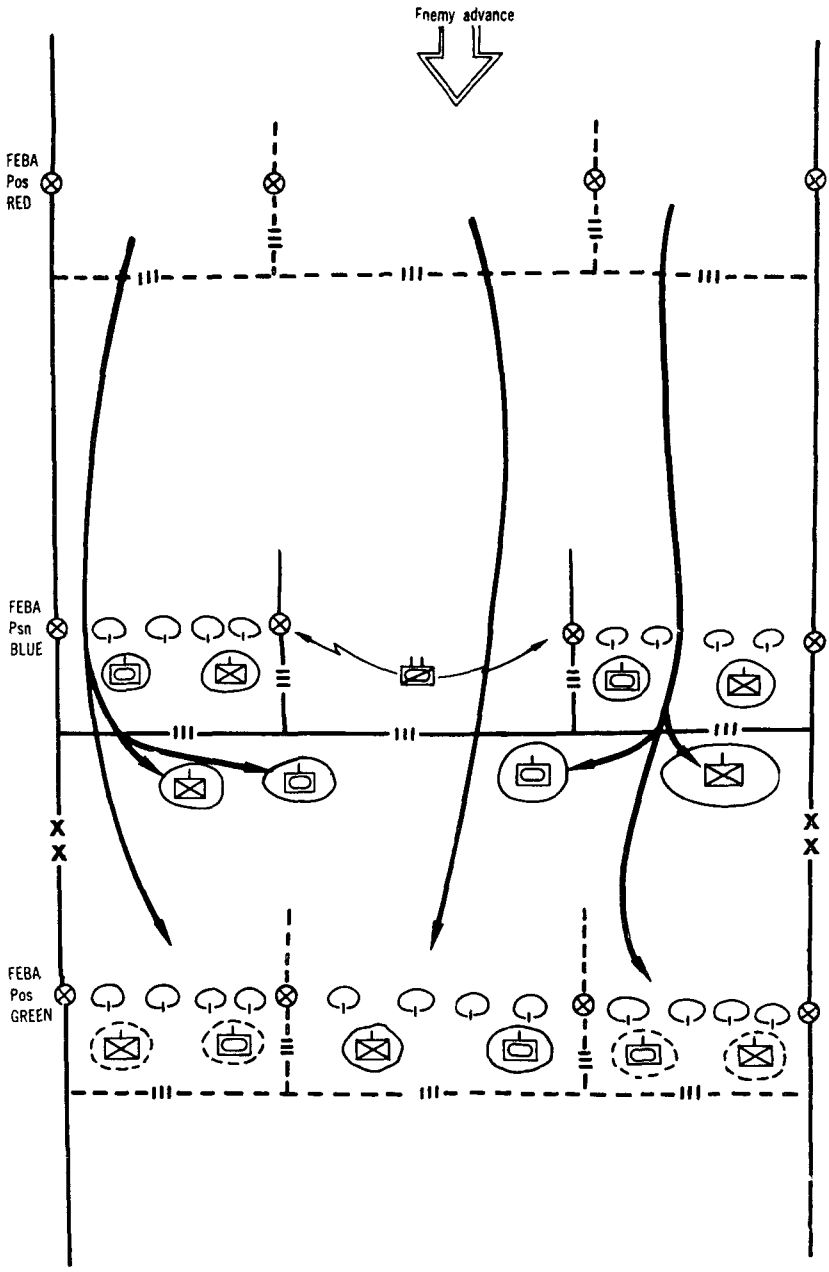


Figure 29. Delay on alternating positions. Forces from initial delaying position have withdrawn through second position; a portion goes into mobile reserve, while the remainder occupies the third position.

his forces and to displace his close support artillery in order to continue his attack from one position to the next. They should be close enough to permit the delaying force to move from one position to the next during darkness of one night.

(2) A mission to delay will prescribe the initial position to be occupied, the general locale at which the enemy must be held, and the time for completion of the mission. From this guidance the commander selects suitable delaying positions and analyzes the natural defensive strength of each. He estimates the time to be consumed in withdrawal of his main force between each position. He estimates the time of contact with the enemy on the initial position. Having completed these analyses, the commander has the necessary information from which to decide the *minimum* delay which *must* be accomplished on each position.

b. Allocation of Combat Power.

(1) *Forces in the forward defense area.* The deployment on each position places the bulk of the available firepower forward. Little depth is attempted in the organization of the forward defense area. All combat elements are provided the greatest possible tactical mobility.

(2) *Division reserve.* The division reserve is relatively small and is mobile. Its size and composition are based primarily upon its anticipated employment for maintaining the overall combat integrity of the division.

(3) *Security forces.* The general outpost force consists of mobile combat elements and reconnaissance aviation so composed that it can provide information of the enemy approach. This force is usually provided from the reserve based upon the amount of combat power the commander is willing to employ in the security role.

(4) *Fire support.* Fire support is allocated to insure support for security elements but especially throughout the depth of the position.

c. Detailed Plans.

(1) *Organization of the ground.* Lateral boundaries, extending rearward through the next position to be occupied, delineate unit areas of responsbility. An enemy avenue of approach is included entirely within the zone of one unit. A unit zone of action is usually wider in a delaying action than it is in a defensive operation. Frequently

time will not permit the preparation of elaborate positions. Priority is given to providing observation and fields of fire and to the preparation or improvement of barriers.

(2) *Fire support.* Artillery, to include nuclear delivery means, is prepared to place long-range fires on the enemy. The great width normally associated with delaying action results in a reduction of the volume of fires which can be concentrated in one locale on short notice. Accordingly, control of artillery fires is usually decentralized.

(3) *Security.* Security measures for a delaying action are essentially the same as those for a defensive operation.

(4) *Employment of the reserve.* Plans provide for the use of all or elements of the reserve to maintain the integrity of the position, to conduct limited offensive maneuver (to include spoiling attacks), and to cover the withdrawal of the main force.

(5) *Preparation of rearward positions.* Normally the division prepares its own rearward positions, using such elements of the division as may be available. When practicable these positions are prepared in advance of the withdrawal, otherwise their preparation is accomplished by the main force under the protection of the division covering force.

(6) *Withdrawal to rearward positions.* See paragraphs 234 through 238.

(7) *Tactical cover and deception.* It is of the utmost importance that plans of this nature be coordinated in detail with the operations plan and with the plans of adjacent and higher commands.

233. Conduct

a. Security forces provide warning of the enemy approach. They seek intelligence information, especially nuclear target data. These forces normally are constituted to accomplish minimum delay only. Upon their withdrawal they revert to division reserve.

b. Forces in the forward defense area normally engage the enemy with long-range fires in order to inflict casualties and to force him into time-consuming deployments. Located enemy concentrations are destroyed by all available fires. Upon occasion the effects of these fires are exploited by maneuver elements, normally from the reserve. The employment of nuclear weapons without such expoitation is, however, consistent with the purposes of a

delaying action. These forces attempt to accomplish their delay mission without becoming heavily engaged, although the availability of nuclear weapons and their precision delivery means permit heavier and closer engagement than would otherwise be permissible.

c. The reserve exploits enemy weaknesses and takes advantage of enemy mistakes by executing spoiling attacks. Depending upon the type of delay being conducted the reserve counterattacks as necessary to restore the position, to destroy major enemy penetrations or encircling maneuvers, or to extricate heavily engaged units. The division reserve provides the covering force for the withdrawal of the main force to the next rearward position. It also conducts delay between successive positions.

Section III. WITHDRAWAL

234. General

a. A withdrawal is an operation in which all or part of a force disengages from the enemy. It may be executed during daylight or under cover of darkness and may be forced or voluntary.

b. In contrast to daylight withdrawals, withdrawals at night or during conditions of poor visibility tend to preserve freedom of action, achieve secrecy and surprise, and reduce casualties.

c. When possible, plans for withdrawal are made far enough in advance to permit subordinate unit leaders to conduct daylight reconnaissance. In any event, units develop standing operating procedures which will facilitate their daylight or night-withdrawals on short notice and with minimum confusion.

d. Reserves are used to cover the withdrawal of the division. They may be used to reconnoiter and insure retention of localities essential to the success of the withdrawal. The commander determines the enemy actions which most seriously jeopardize the withdrawal mission and rapidly commits his reserves at the proper time and place to counter those actions.

e. Fire planning provides for unobserved fires throughout the zone. When nuclear weapons are used to assist in disengaging a unit, a clearly recognizable nuclear safety line is designated and troops are warned to prevent dazzle. Special security measures are taken to insure the safety of nuclear delivery means. This security is furnished by coordinating movement and location of nuclear delivery means with elements of the division reserve or with other tactical units which are to be moved to the rear in the early stages of the withdrawal. The withdrawal of all artillery

units is coordinated with that of the other tactical elements of the division.

f. Enemy airborne, airmobile, and guerrilla activities in the rear can seriously interfere with a withdrawal. Their likely objectives are bridges, communications centers along main routes of withdrawal, and nuclear delivery means. Plans to counter such enemy actions include—

(1) Timely reconnaissance for alternative routes.
(2) Establishing priorities and forces to guard critical localities. For example, small helicopterborne forces may be used to insure retention of key defiles.
(3) Providing for early and accurate location and destruction of enemy forces.
(4) Rapid means of designating and controlling alternative routes to bypass enemy roadblocks.
(5) Early reopening of main routes.

235. Withdrawal Plans and Orders

Withdrawal plans and orders provide for the following:

a. Organization for combat on the new position.

b. Sequence of withdrawal of major subordinate units and their routes and/or zones of withdrawal.

c. Priorities for use of routes.

d. Covering forces.

e. Deception and security.

f. Fire support.

g. Evacuation of casualties, supplies, and equipment.

h. Traffic control.

i. Delay between positions.

j. Employment of the reserve.

k. Passage through a rearward position, if necessary.

l. Time the withdrawal is to commence.

236. Conduct

a. Elements of the main force usually initiate movement to the rear in the following sequence:

(1) Elements to prepare rearward positions.
(2) Administrative and service units.
(3) Artillery not essential to support the units in contact.
(4) Units in contact.
(5) Covering force.

b. At the time prescribed for the withdrawal, units move to the

rear and assemble in company assembly areas, then continue the move to the next position. The battle group uses an initial point or a system of checkpoints for control. Assembly areas are used for the briefest possible period since this is the time when the withdrawing units are the most vulnerable. Each commander is responsible for the security of his assembly area.

c. The division reserve covers the withdrawal of the main force, either from present positions or by establishing a general outpost for the new position.

237. Night Withdrawal

a. General.

(1) Success of a night withdrawal depends upon control, deception, and security. Control is provided for thorough detailed preparation of plans.

(2) Deception and security are enhanced by the following actions:

(*a*) Noise suppression within withdrawing units.

(*b*) Simulating normal fires and other activities.

(*c*) Maintaining normal radio traffic, on position and listening silence by withdrawing units.

(*d*) Use of covered routes.

(3) Depending upon the tactical plan, units moving to the next rearward position move to intermediate positions or leapfrog to the rear. If possible, forward battle groups withdraw simultaneously on a broad front. Routes of withdrawal are normally designated for artillery, trains, and the division reserve. Zones and/or routes are specified for battle groups.

b. Night Withdrawal Not Under Enemy Pressure.

(1) Detachments left in contact.

(*a*) Forward battle groups leave detachments in contact normally not exceeding one-third of the infantry strength of the battle group. These detachments, supported by mortars, machineguns, artillery, and antitank weapons, simulate normal activity of a fully garrisoned position.

(*b*) The time prescribed for withdrawal of detachments left in contact should allow sufficient time for them to come under the cover of the rear security force by daylight.

(*c*) The brigade commander or a designated individual is given the mission of controlling the operations and withdrawal of the detachments left in contact.

(2) Assembly areas for withdrawing units are usually in the vicinity of the first covered position to the rear. Security detachments of infantry and antitank means protect the withdrawal to and through these assembly areas. When practicable, these security detachments take up positions prior to darkness. They cover all likely avenues of approach into the assembly areas, particularly those which are suitable for armor.

(3) The general outpost for the new position is normally provided by the division reserve. It moves to the rear early to outpost the new position. The commander of this force sends elements forward to establish liaison with the detachments left in contact and to maintain contact with the enemy after these detachments have withdrawn.

c. Night Withdrawal Under Enemy Pressure. A night withdrawal under pressure differs from one not under pressure in that—

(1) A specific time of withdrawal may not be given, and orders, when given, will normally direct withdrawal without delay.

(2) No detachments are left in contact since they would serve no deceptive purpose and would be quickly overrun.

(3) Since forward units frequently withdraw fighting, zones of action as well as routes of withdrawal are assigned to facilitate control and to coordinate fires. Assembly areas for the forward units are located in rear of the division covering force.

(4) The division reserve normally blocks along routes or roads in the zones of the withdrawing battle groups, provides security for withdrawing forces, prevents breakthrough or assists the withdrawing forces, by fire and/or maneuver, in breaking contact with the enemy.

238. Daylight Withdrawal

a. General.

(1) Success of a daylight withdrawal depends upon speed of execution, control, effective fire support, local command of the air, and proper employment of security forces.

(2) The necessity to disperse and to move rapidly under enemy observation and fire complicates control. Accordingly, routes of withdrawal, zones of action, phase lines, priority of movements, and traffic control are specified in orders.

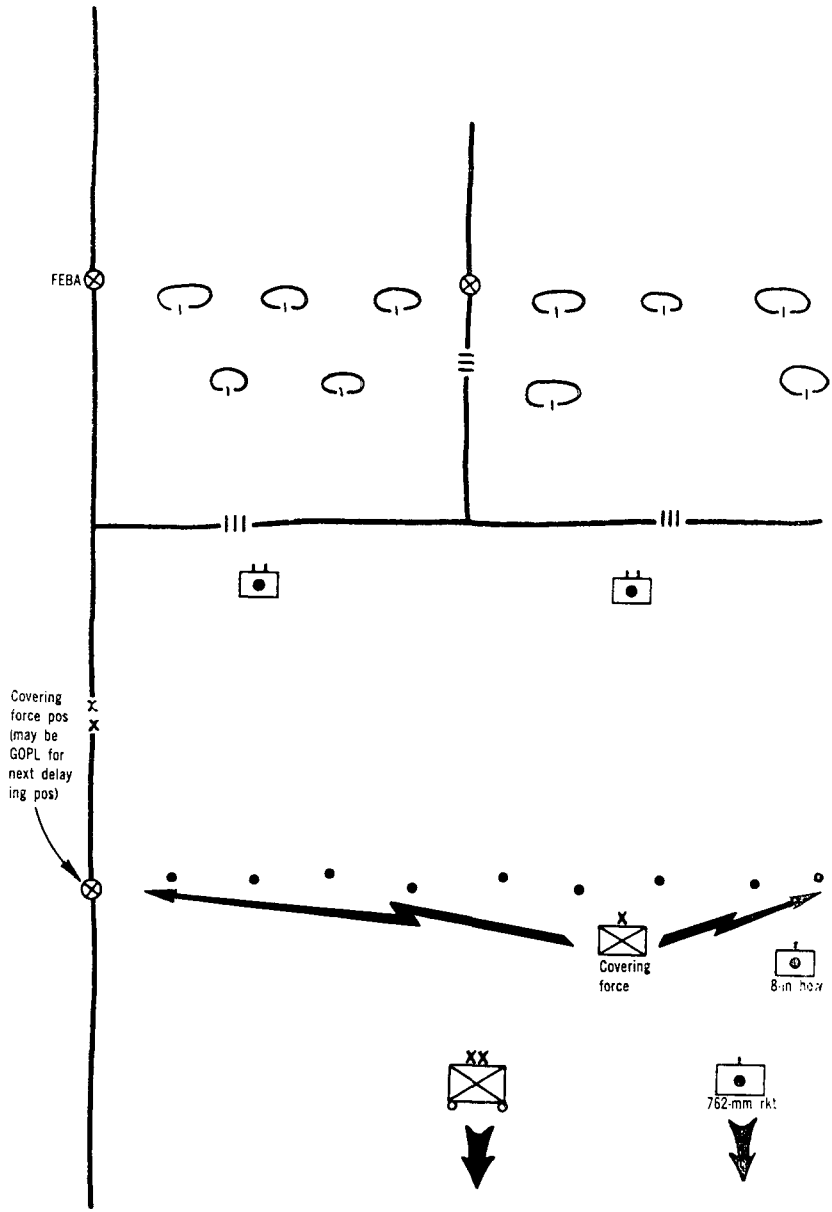


Figure 30. Voluntary Night Withdrawal—First Phase. Trains and part of general support artillery move to the rear. Division reserve or other covering force takes position. (Part of division zone omitted for clarity.)

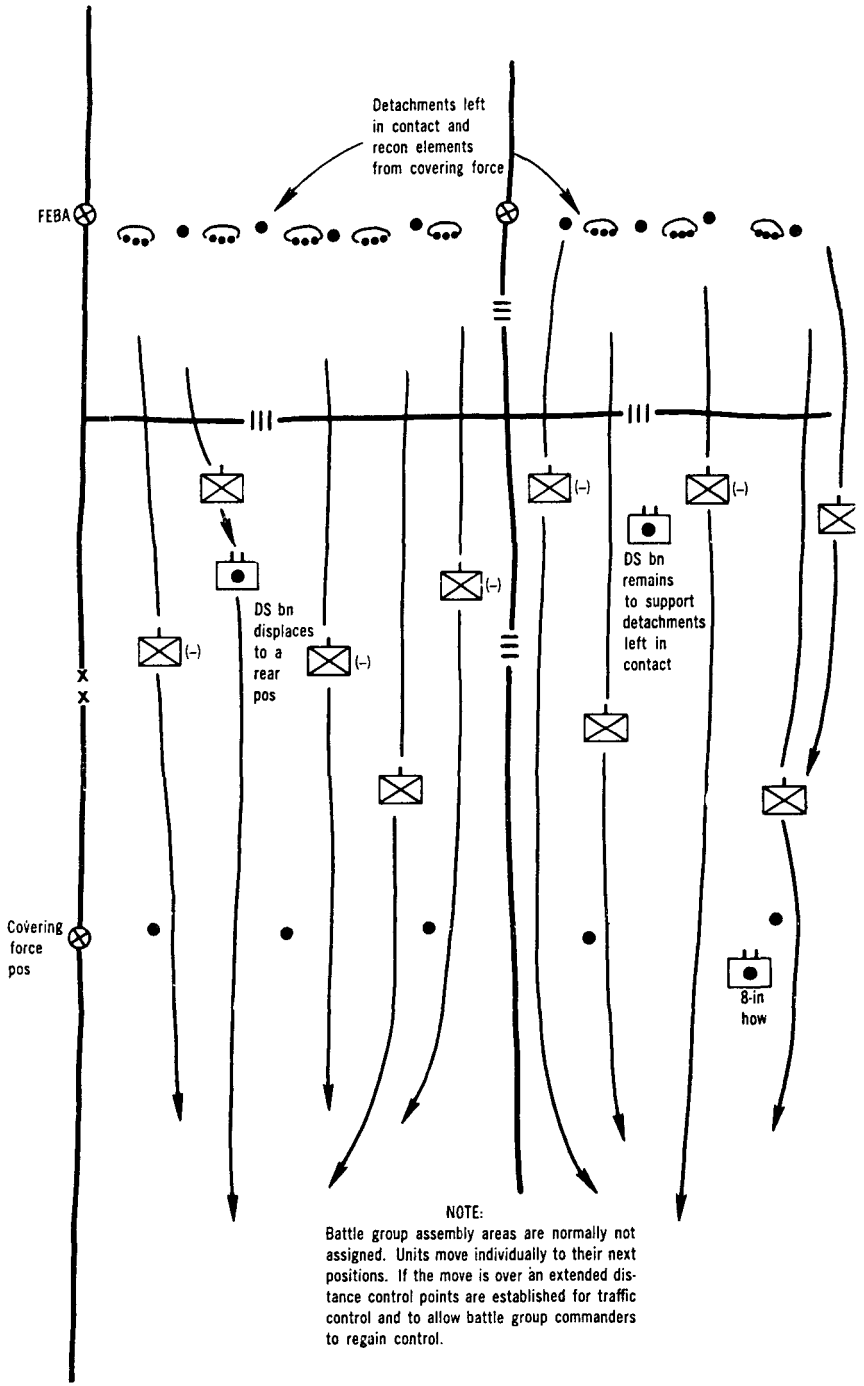


Figure 31. Voluntary Night Withdrawal—Second Phase. Bulk of forces in forward defense area withdraw.

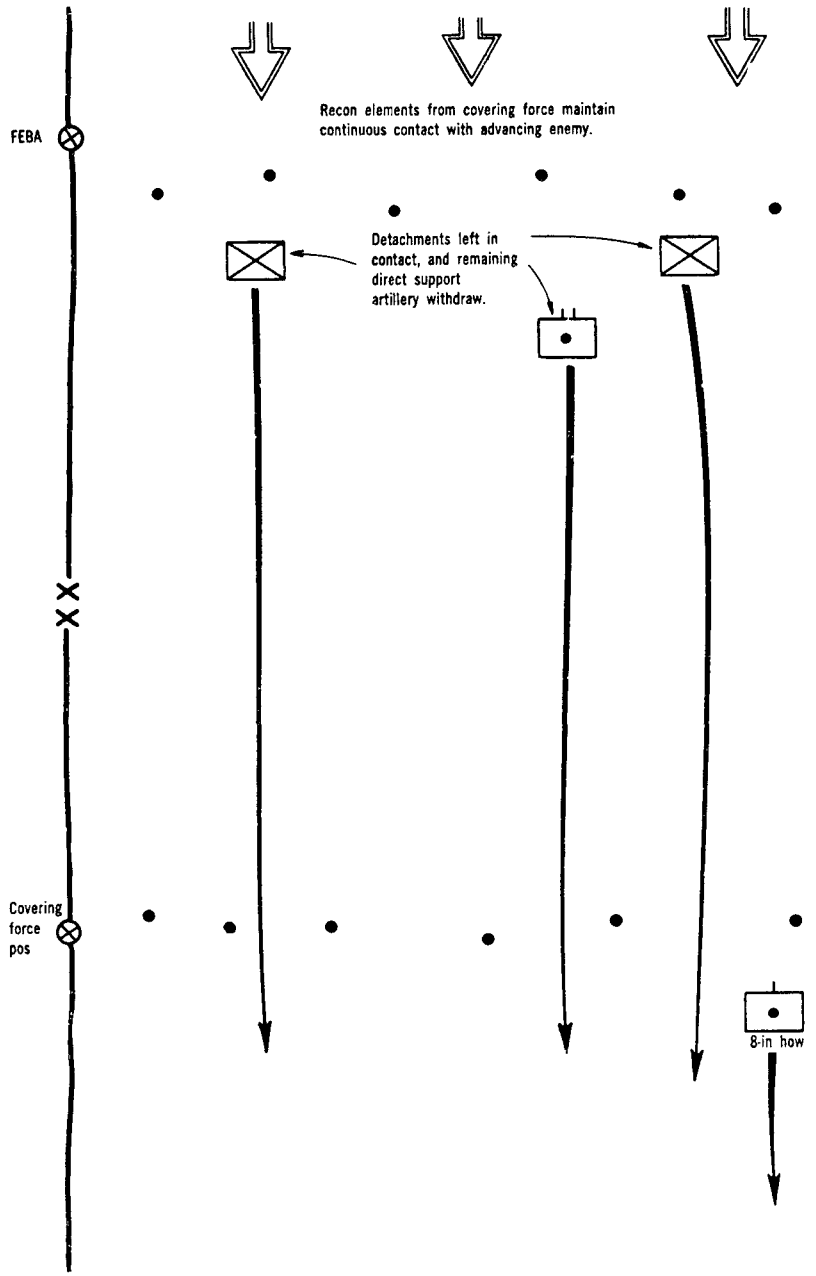


Figure 32. Voluntary Night Withdrawal—Third Phase. Remaining forces in forward defense area withdraw.

(3) Close terrain facilitates daylight withdrawals by limiting enemy observation and by affording cover and concealment to the withdrawing forces. Open terrain favors covering action by mobile forces, but exposes friendly troops to enemy observation, and facilitates enemy use of armor.

b. Conduct.

(1) At the start of a daylight withdrawal heavy fires are placed on the enemy to assist the forward units in breaking contact. Withdrawing forces fight their way to the rear, as necessary, until they break contact or come under the protection of the covering force.

(2) The covering force is provided by the division reserve. It accomplishes its mission either from the area of the general outpost of the new position or from prescribed areas forward thereof. In addition to covering the withdrawal of the forward defense forces, it is prepared to assist those forces to break contact and to conduct delay between successive positions. It should be mechanized or motorized, and augmented by field artillery, armor, engineers, and if available, air defense artillery.

(3) The withdrawal of units in contact does not follow a particular sequence. Generally speaking, the least heavily engaged units are withdrawn first. When a unit is heavily engaged, the division commander acts quickly to prevent its destruction. He uses uncommitted units, or units which can be withdrawn more easily and fires to assist in the withdrawal of such heavily engaged elements.

(4) When smoke is used to assist units in a daylight withdrawal, care is exercised to insure that it does not provide a screen for the advance of enemy units, or that it does not interfere with friendly movement.

Section IV. RETIREMENT

239. General

A retirement is an operation in which a force not in contact moves away from the enemy.

240. Control and Coordination

a. The formation and number of columns employed depend upon the number of available routes and the capability of the enemy to interfere. It is desirable to move major elements to the rear

simultaneously. Restricted road nets, enemy air action, or enemy ground threats may require echelonment of the move.

b. The division commander designates specific routes for administrative and tactical support elements and issues instructions concerning clearance of routes for combat elements. If zones of action and routes are assigned to tactical elements for their initial movement, control is decentralized. Centralized control is established by division as the retirement develops.

241. Security

a. The rear guard is the principal security of each column. Its composition is similar to that of an advance guard and its size and composition depend upon the organization of the force and the imminence and nature of enemy attack.

b. Mobile forces constitute the advance guards and flank security to meet the threat of enemy forces, to prevent surprise, and to clear march routes.

c. The main body is normally organized in a manner inverse to that of an advance to contact.

d. Reconnaissance aviation maintains surveillance of leading hostile elements and combat aviation aids in delaying the pursuing enemy. Air and ground reconnaissance elements closely coordinate their activities. Artillery and air observers are prepared to place long-range fires on enemy forces. Use of Army aircraft facilitates column control.

e. Communications discipline is emphasized, particularly during the early stages, to preserve secrecy.

242. Conduct

a. Administrative units and division trains initially move to dispersed rearward assembly area. Dumps or mobile distributing points of ammunition, fuel, and rations are established for the remainder of the division.

b. At the designated time, tactical units move into dispersed assembly areas and form rapidly into march columns to begin the retirement.

c. Initially the division uses multiple small columns. Forced marches may be required to place maximum distance between the enemy and the retiring force.

Section V. PASSAGE THROUGH A REARWARD POSITION

243. General

a. In defensive operations a unit is often required to withdraw through an occupied friendly position located to its rear. A division acting as the covering force for a corps ultimately passes through the corps forward defense area. Similarly the division general outpost withdraws through the division forward defense area. In the delaying action, the unit withdrawing from one position to the next passes through a covering force.

b. When the division is to pass through a rearward position, the division commander is particularly concerned with—

(1) The time for transfer of responsibility for the zone from his command to the covering force commander.

(2) The coordination of fires of the covering force with the withdrawal of division elements.

(3) Movement of the division through the barrier system of the covering force.

(4) Coordination for use of routes through and in rear of the covering force by the division.

244. Transfer of Responsibility

a. The exact time at which responsibility for the zone passes from the commander of the withdrawing force to the commander of the covering force is mutually agreed upon by the two commanders. Generally speaking, the withdrawing force commander retains responsibility until his maneuver elements have broken contact with the enemy and their withdrawal without further engagement is reasonably assured.

b. It is normally infeasible to designate a particular hour for the transfer of responsibility. The time is usually expressed in terms of the occurrence of a particular event. For example, the passage of a predesignated line by the last element of the withdrawing force may be prescribed as the time at which the covering force commander assumes responsibility for the zone.

245. Coordination of Fires

Artillery fires of the covering force are employed in support of the withdrawing force. Fire support elements of the withdrawing force may take position in rear of the covering force to support the latter. In either case, all fires delivered in the zone are controlled through the headquarters of the commander responsible for the zone.

246. Movement Through the Covering Force

a. The withdrawal of elements through the covering force is carefully planned and closely coordinated. The covering force provide sufficient routes through its barrier system to facilitate rapid passage of the withdrawing force. Defiles essential to the withdrawal are secured against sudden seizure by the enemy. This task is usually accomplished by the covering force but may be assigned to leading elements of the withdrawing force. Caution is exercised to insure that demolitions planned by the covering force are not executed prematurely.

b. The use of routes through, and in rear of, the covering force is controlled by the covering force commander. Plans for the use of such routes are carefully coordinated between the two commanders to insure that the withdrawing force clears the area as rapidly as possible. During the time of the passage, both forces are highly vulnerable, especially to nuclear fires.

247. Coordinating and Control Measures

Measures employed to coordinate and control the passage include—

a. Coordinating conferences between commanders and staffs of both forces.

*b. E*xchange and wide dissemination of the detailed plans of both forces.

c. Thorough reconnaissance of routes to and through the covering force position by key personnel of the withdrawing force.

d. Exchange of liaison parties between the covering force and the withdrawing force. These liaison groups are provided with communications which enable them to know the situation in their respective units at all times. Each commander in the withdrawing force notifies his next higher commander and the appropriate commander(s) in the covering force as soon as the last element of his unit has cleared the forward elements of the covering force.

e. Use of Guides. The covering force normally furnishes guides to facilitate the movement of withdrawing units through the covering force positions.

f. Coordination of Boundaries. Boundaries between elements of the withdrawing force are coordinated with those between elements of the covering force, to ensure each withdrawing unit becomes involved with the minimum number of commanders in the covering force.

CHAPTER 9
RELIEF OPERATIONS

Section I. GENERAL

248. Purpose and Types of Relief

a. When tactical operations continue over a prolonged period, conservation of fighting power, maintenance of effectiveness, and the tactical plan may require the periodic relief of committed units. Such reliefs are effected by a relief in place, a passage of lines, or a withdrawal through a rearward position.

b. The infantry division may participate in a relief where the entire division relieves another division, or it may direct and control internal reliefs of subordinate units.

249. Basic Considerations

The following considerations are common to the planning and execution of all types of reliefs.

a. Adequate time must be provided for careful planning and thorough reconnaissance. Early issuance of warning orders is mandatory.

b. Plans must be detailed, yet simple, and well coordinated between all echelons of the relieving and relieved units.

c. When possible, reliefs should be executed during periods of reduced visibility.

d. The plan for tactical deception must include all practicable measures to insure secrecy and surprise.

e. The relief must be executed efficiently, in the shortest possible time, and with every possible precaution taken to reduce vulnerability to enemy attack during the time the relief is being accomplished.

Section II. RELIEF IN PLACE

250. Definition

A relief in place is an operation in which all or part of a unit is replaced in a combat area by a relieving unit. The combat mission and area of operation responsibilities of the relieved unit are assumed by the relieving unit. The relief in place is executed

when the unit being relieved is on the defense. The relieving unit may have the mission of continuing the defense or preparing for a subsequent attack. In either case the relieved unit, or elements, are withdrawn.

251. Planning Procedures

a. General. When the infantry division relieves another unit in place, the warning order to the division must specify, as a minimum, the time for commencing and completing the relief and the priorities for use of routes involved. The warning order will normally direct that the relief be carried out under cover of darkness or other conditions of reduced visibility. The order may direct the relief to be completed in one or more nights. Upon receipt of the warning order, the division commander and staff analyze the mission, issue internal warning orders, and prepare to visit the unit to be relieved. The division will establish its tactical command post in the vicinity of the main command post of the unit being relieved. Here, joint conferences between the commanders and staffs of the two units concerned are held to work out the details of the relief.

d. Details To Be Coordinated. Procedures for the accomplishment of the following must be agreed upon:

(1) *Exchange of plans and liaison personnel.* The incoming unit commanders and staffs must be briefed and become thoroughly familiar with the existing defensive plans to include fire plans, barrier plans, and counterattack plans. To facilitate the efficient transfer of information concerning the plans, dispositions, and area of operation, the unit being relieved leaves liaison personnel with the relieving unit. The number of these personnel and the duration of their stay with the relieving unit vary with the situation. Normally, they will remain with each headquarters and major weapon element of the relieving unit from company level up. These personnel usually remain for a specified time until the incoming units gain adequate familiarity with the new situation.

(2) *Sequence of relief* (if not specified by the headquarters ordering the relief). To insure the strongest defense during relief, the relief in place is executed by stages, either rear to front, or front to rear. In determining the sequence of the relief, both commanders should consider—

(*a*) The subsequent mission of the division that is conducting the relief.

(*b*) The strength and combat efficiency of the unit presently in the forward defensive area.

(*c*) The capability of the enemy to detect and react against the relief.

(*d*) The characteristics of the area of operations.

(*e*) The need to vary the pattern of relief.

(*f*) Size and type of elements involved in the relief.

(3) *When "command is to pass."* The time or circumstances under which the relieving unit commander will assume responsibility for the area must be clearly established. Until command passes the outgoing unit commander retains responsibility for the area and mission and exercises operational control over all subordinate elements of the relieving unit which have completed their portion of the relief. During this period, the incoming units must fit into and accept the general defense plans of the outgoing unit. Normally, command passes to the relieving commander when the units in the forward defensive area have been relieved by his subordinate units and when adequate communications means have been established. When command passes, the incoming commander assumes operational control of all units of the outgoing unit which have not yet been relieved.

(4) *Reconnaissance.* Arrangements must be made for a thorough daylight reconnaissance by commanders and staff officers of all echelons of the relieving unit. Reconnaissance should include an inspection of existing defensive installations, relief routes, detrucking and turnaround points, weapon positions, and administrative installations.

(5) *Security.* Every effort must be made by all echelons of the relieving and relieved units to prevent the enemy learning that a relief is taking place. In addition to conducting the relief during periods of reduced visibility, the following security measures should be taken:

(*a*) Every form of normal activity in the area of operations must be maintained during the relief. The relieving unit should pick up the normal pattern of harrassing and interdiction fires, patrols, communications traffic, and movement previously employed by the outgoing unit.

(*b*) Restrictions on the size of advance parties and reconnaissance parties must be enforced. These parties should move to the area of operations by infiltration.

(*c*) Aerial reconnaissance by members of the relieving unit should be made in aircraft of the unit being relieved.

(*d*) Radio nets of the relieving unit should not be used in the new area until after the relief is complete.

(*e*) Registration of fires of the relieving unit should be coordinated by the outgoing unit until command passes. If the relieving unit has different calibers or types of weapons, these weapons should not be fired (except in an emergency) until the relief is complete.

(*f*) An integrated tactical deception plan should be executed by both the relieving and relieved units.

(6) *Movement control.* Joint arrangements between the relieving and relieved units must be made for the control of units moving into and out of the area. Coordination must include—

(*a*) Routes to be used and priorities for their use.

(*b*) Responsibility for traffic control.

(*c*) Location of detrucking points.

(*d*) Provision of guides for relieving units.

(*e*) Common use of transportation.

(7) *Intelligence.* The unit being relieved transfers to the incoming unit all information and intelligence concerning the enemy and the area of operations. Additional intelligence information required by the relieving unit should be obtained by the unit being relieved.

(8) *Fire support.*

(*a*) The method of relieving fire support units must be clearly established. Normally the artillery of the unit being relieved will remain in position until the units in the forward defensive area have been relieved. This procedure insures that fire support units which are familiar with the fire support plans and the area of operations are in position to fire during the critical period of the relief of forward units.

(*b*) If sufficient firing positions are available, the relieving artillery may elect not to take over the outgoing artillery's firing positions, and may select new positions from which the same fire missions can be accomplished. In this case the relieving artillery moves into position by battery under the battalion control. The incoming artillery is prepared to take over fire missions before the relieved batteries are withdrawn.

(*c*) When the lack of firing positions so dictates, artillery may be relieved in place. In this case, it may be necessary to relieve by platoon or section to avoid congestion.

(*d*) When the relief is to be conducted over a period of more than one night, the relieving artillery will normally move at least 1 gun per battery forward the first night in order to secure registration data. In any case, liaison officers and forward observers of the relieving unit join the outgoing units as soon as possible in order to become familiar with the existing fire plans.

(*e*) Until command passes, registration and all other fires of the incoming artillery units are controlled by the commander of the artillery being relieved.

(*f*) The headquarters ordering the relief may direct that the artillery of the unit being relieved remain in position to support subsequent operations of the relieving unit. In this case careful coordination of position areas must be made in order to reduce vulnerability.

(9) *Exchange of equipment.* The time available for and other circumstances influencing the relief may require that certain weapons and other equipment be exchanged between the relieving and the relieved units. The extent of such allowable exchange must be authorized by the headquarters ordering the relief.

(10) *Administrative support.* Pertinent administrative support matters such as the transfer of supplies, use of installations, transfer of prisoners of war, operation of refugee camps, displacement of administrative support. units, use of transportation, and traffic control must be coordinated between the relieving and relieved units.

c. Concurrent Planning. The unit executing the relief and the unit being relieved will issue operation orders directing the conduct of the relief in accordance with procedures agreed upon at the planning conference. Prior to the issuance of the operation orders, maximum fragmentary information is disseminated to subordinate units to allow concurrent planning by these units.

252. Conduct of the Relief in Place

a. From a division point of view, two primary factors determine the method in which a relief in place is conducted. These are the sequence of the relief and whether the relief is to be conducted in one or more than one night. Within the scheme dictated by these factors, the relief in place is a series of relief operations conducted by subordinate units and controlled by the division. After detailed divisional planning, execution is decentralized.

b. Once the relief in place is begun, the division staff is primarily concerned with—

(1) Supervising the timing and movement of subordinate unit.
(2) Coordinating joint use of transportation between relieving and relieved units.
(3) Supervising the execution of traffc control.
(4) Preparing to assume overall control after "command passes."
(5) Staying abreast of the situation in order that they can react swifty to any emergency or required change in the plan for relief.

253. Nuclear Considerations

During the actual execution of the relief, the physical presence of two elements in an area where only one is normally positioned inherently increases vulnerability to nuclear attack. Therefore, the planning and conduct of the relief must be made with a proper appreciation of the risks involved. Careful scheduling of the reliefs executed by subordinate units must be accomplished to reduce to the minimum the troop density in the area of operation. Generally, if the relief is conducted over an extended period of time, vulnerability to nuclear attack can be reduced. However, the possibility of enemy detection and reaction against the relief are increased. The threat of nuclear attack emphasizes the requirement for secrecy to avoid detection and the necessity for thorough planning to limit the number and duration of profitable nuclear targets. It also points out the need for early and preplanned tactical deception measures.

Section III. PASSAGE OF LINES

254. Definition

A passage of lines is an operation in which an incoming unit attacks through a unit which is in contact with the enemy. Elements of the unit passed through remain in position and support the attacking unit until their fires are masked, at which time they may be withdrawn or committed to other action in the area of the attack.

255. Planing Procedures

a. General. The planning procedures involved when an infantry division passes through another infantry unit are very similar to those detailed in paragraph 251 for a relief in place. Upon receipt of a warning order which directs an operation requiring a passage of lines, the division commander and his staff will make early contact with the unit being passed through. Arrangements

will be made to establish a division tactical command post in the vicinity of the command post of the unit to be passed through and for the initiation of planning conferences to work out the details of the passage.

b. Details To Be Coordinated. During the planning conferences the following details must be carefully coordinated by the commanders of the units involved:

(1) Exchange of intelligence.
(2) Exchange of tactical plans.
(3) Arrangements for reconnaissance by elements of the units passing through.
(4) Measures to be taken to provide security during the passage.
(5) Selection of areas of passage and provisions for guides.
(6) Priorities for use of routes and provisions for movement control.
(7) The time or circumstances when responsibility for the area of operations will be transferred to the unit passing through.
(8) Extent of fire support and other tactical support to be provided by the unit being passed through.
(9) Extent of administrative support to be provided by the unit passed through.

c. Selection of Areas of Passage. When possible, the areas selected for the actual passage of lines should be the unoccupied areas between elements of the unit in position or on its flanks. This procedure reduces the vulnerability that results when one unit passes directly through the occupied positions of another unit. Vulnerability is also reduced when the subordinate units of the division making the passage move directly to the areas of passage and on into the attack without occuping forward assembly areas.

d. Priorities for the Use of Routes. The unit passing through must have priority for use of routes to and within the area of the unit being passed through. Route priority should be established by the headquarters directing the passage of lines. Traffic control in the area of the unit being passed through is the responsibility of that unit until the responsibility for the area passes to the passing unit. The passing unit may augment the traffic control capability of the unit in position during the time of passage.

e. Passage of Command. The time or circumstance when responsibility for zone of action is transferred to the commander of the unit executing the passage of lines must be mutually agreed

upon by the two commanders concerned. Normally, the commander of the unit making the passage of lines assumes responsibility for the zone of action at or prior to the time of attack, i.e., when the attacking elements cross the line of departure. The responsibility for the area may shift at the time of the firing of the preparatory fires or earlier at the direction of the headquarters ordering the relief. This transfer of responsibility requires that the commander making the passage assume operational control of those elements of the unit being passed through that remain in contact at the time of the transfer.

f. Tactical Support.

(1) The unit in contact provides all possible aid to the unit passing through, e.g., the gapping of minefield, provision of guides, fire support, and other tactical support within its capabilities.

(2) Normally, because of problems of control, only the indirect fire means of the unit in contact will be used to support the passing unit. After responsibility for the zone of action is transferred to the passing unit, the artillery commander of that headquarters coordinates the fires of the artillery of the unit which has been passed through.

(3) It is desirable to employ the artillery of the unit making the passage to support the attack. However, if the attack is receiving nuclear support, it may not be necessary to increase troop density by deploying the artillery of the attacking unit in the forward area. In this case, the artillery of the unit in contact supports the attack initially and the artillery of the attacking unit is placed in rear positions ready to move to forward firing positions to support the continuation of the attack.

g. Administrative Support. The unit in contact provides assistance to the attacking division in administrative support matters as follows:

(1) Evacuation of casualties and prisoners of war.

(2) Civilian control.

(3) Use of areas and facilities, e.g., water points.

(4) Route priority and traffic control.

256. Conduct of the Passage of Lines

a. Elements of the attacking division move, by motor preferably and during periods of reduced visibility, from rearward positions in order to cross the line of departure at the scheduled time. Care-

ful march calculations must be made to insure that the attacking units reach the line of departure at the correct time without the requirement for use of a forward assembly area. This procedure reduces to the minimum the time in which elements of two units are concentrated in the forward area.

b. If the attack subsequent to the passage of lines is preceded by a nuclear preparation, it will be necessary because of the different degree of protection available for both the attacking division and the unit being passed through to prescribe nuclear safety lines. The timing of the movement of the attacking elements from the rear must then provide for these units to reach the nuclear safety line, take the prescribed safety precautions, and then move across the line of departure at the specified time after the nuclear preparation.

c. In some situations it may be desirable to displace the reserves of the unit in contact to rear assembly areas just prior to the beginning of the passage of lines. This procedure reduces troop density during the passage. If this procedure is used, it will normally be prescribed by the headquarters ordering the passage of lines.

257. Passage of Armor Units Through Infantry Units

a. The passage of a major armor unit through an infantry division involves certain differences inherent in the characteristics of armor.

b. Normally, a passage of responsibility for the zone is unnecessary in view of the different missions of the armored and infantry divisions. After the passage of lines, the mission of the infantry frequently will be to follow and support. In addition, the infantry may be given the responsibility for clearing the zone of the enemy bypassed by the armored units.

c. Detailed coordination between the units concerned is required because of the length of armored columns, the noise created by the movement of large numbers of armored vehicles, the sensitivity of armor to terrain, and the congestion in the zone. Coordination is greatly facilitated when the passage of each armored element takes place wholly within the lateral boundaries of one infantry unit.

d. Special emphasis must be placed on the following coordination measures:

(1) Refueling areas and routes into and out of these areas are reconnoitered by personnel from the armored unit assisted by guides furnished by the infantry. It may be

necessary for the infantry to adjust their positions to facilitate passage, but such adjustments should be held to a minimum.

(2) Clearing and marking the lanes through friendly minefields to permit the rapid passage of armor is accomplished by the infantry being passed through. Armored units should provide their own liaison officer at difficult gaps or defiles to check each subunit through.

(3) Details of fire support to be furnished by the infantry division must be coordinated.

(4) Priority on roads is normally given to the armor consistent with the traffic essential to the support of other units.

(5) Within its capabilities, the infantry furnishes administrative support to the armor during and immediately after the passage. It may include the use of medical facilities, handling of prisoners of war, clearing roads of refugees, and assisting in handling the dead. The infantry division may assist the armored division in the resupply of POL in the armored division refueling areas.

258. Withdrawal Through a Rearward Position

A withdrawal through a rearward position is a passage of lines to the rear in which the unit withdrawing transfers responsibility for the sector to the unit through which it withdraws. This operation is normally conducted as part of the defense or delaying action and is discussed in chapters 7 and 8.

Section IV. CONSIDERATIONS AFFECTING THE CHOICE OF RELIEFS PRIOR TO ATTACK

259. General

Situations will frequently arise within the infantry division which require that a unit in contact be relieved prior to the initiation of an attack. This can be accomplished by either a relief in place prior to the attack or a passage of lines. The following paragraphs discuss the considerations affecting the choice of methods of relief.

260. Relief in Place

When sufficient time is available, the relief in place prior to an attack should be employed in those situations where—

a. The unit being relieved is required in another area prior to, or just after the attack is launched.

b. The capability of the enemy is such that the troop density involved in a passage of lines constitutes an excessive risk.

c. The attacker requires more detailed familiarity with the terrain and the enemy situation.

261. Passage of Lines

The passage of lines is preferred prior to the attack when—

a. There is insufficient time to conduct a relief in place.

b. When more flexibility is desired in the selection of the formation for the attack.

c. When the fire support of two units is desired in a particular area.

d. When a major change in the direction of attack is planned.

e. When it is desired to maintain continuous offensive pressure against the enemy.

CHAPTER 10
OTHER TACTICAL OPERATIONS

Section I. GENERAL

262. Introduction

The infantry division can operate under any and all conditions. However, it may have to be augmented with additional equipment and/or specialized troops such as chemical, engineer, and ordnance when required by the characteristics of the area of operations, the nature of the operations, conditions under which the operations may be conducted, or a combination of these factors.

263. Applicability of Doctrine

The principles enunciated elsewhere in this manual are applicable to the tactical operations described in this chapter. Their application must be modified by the special conditions of the operation under consideration.

Section II. UNRESTRICTED SCALE OF USE OF NUCLEAR WEAPONS

264. General

a. The infantry division may fight under conditions of heavy and widespread use of nuclear fires. This condition is described as "the unrestricted scale of use of nuclear weapons." In addition, during operations being conducted under a lesser overall scale of use, local conditions may at times resemble the unrestricted scale. The principles contained herein apply to operations under conditions of the unrestricted scale; but, appropriately modified, they may be applied to the local condition of high usage.

b. FM 100–5 describes the scales of use of nuclear weapons and contains fundamental guidance on operations under conditions of the unrestricted scale of use of nuclear weapons.

265. The Unrestricted Scale of Use of Nuclear Weapons

a. The term "unrestricted scale of use of nuclear weapons" denotes a nuclear saturation caused by the use of a large number of

nuclear weapons or of high yield weapons to the degree that normal maneuver is not possible. As the numbers and yields of weapons increase, the ability of a force to accept nuclear attacks decreases. This in turn reduces the ability of close combat units to maneuver. When this restriction reaches the point that maneuver is insignificant, the condition is in the range of unrestricted scale of use of nuclear weapons.

b. The unrestricted scale of use of nuclear weapons is extremely destructive and results in high casualties to both troops and civilians within and without the battle area.

c. The use of chemical and biological weapons by both friendly and enemy forces will probably increase with the use of nuclear weapons.

d. Achievement of nuclear fire superiority is a major consideration. Loss of nuclear fire superiority risks defeat. All combat forces contribute to the gaining and maintenance of this superiority.

e. During conditions of this scale of use of nuclear weapons, close combat units are principally concerned in preserving force integrity, contributing to achievement of nuclear fire superiority, and preparing to launch a rapid exploitation when the opportunity is presented. They conduct defensive operations and limited offensive operations.

f. During or immediately following battle under conditions of the unrestricted scale of use of nuclear weapons, a small mobile exploiting force, aggressively used, may be decisive.

266. Basic Considerations

a. The division preserves its integrity by dispersing itself in small task forces; by dispersing its tactical, tactical support, and administrative support elements into multiple areas or installations; by maintaining dispersed alternate command installations; by deception measures; and by vigilant security measures. Passive protective measures are emphasized. These measures include the preparation of underground personnel shelters, protection of supplies and materiel by use of earth works, maximum use of mineshafts, caves, and other subterranean systems, camouflage, and rigid enforcement of personal protective measures.

b. Nuclear delivery means of the division may participate in the battle for nuclear fire superiority by destroying or neutralizing enemy nuclear delivery means, nuclear weapons stockpiles, and command and control agencies. Nonnuclear fire means complement nuclear fires and engage targets of lower priority. Maneuver ele-

ments of the division assist in target acquisition and in the protection of nuclear delivery means. In addition, close combat elements conduct raids against enemy installations which contribute to effectiveness of his nuclear capability.

c. The division is prepared at any time to launch exploitation operations. Preservation of its integrity contributes to this preparedness. The division maintains small mobile forces for exploitation purposes. The susceptability of these forces to destruction during the battle for nuclear fire superiority requires that protection be provided them and that they be accorded suitable priority for resources including replacement of destroyed materiel.

d. During this scale of use of nuclear weapons, the division can expect great losses in men and materiel with few, if any, replacements. Consequently, it must husband its means and make maximum use of captured enemy supplies and equipment. The division must be prepared to conduct operations with units which are drastically understrength and in some cases with improvised organization.

e. Morale is a serious problem. Heavy casualties and the psychological aspects of operations under these conditions will have profound effects on troops. The requirement to live in the cramped conditions of underground shelters, the absence of normal rest and recreational facilities, and the enormity of the death and destruction which surrounds the troops will aggravate the problem. Courageous, aggressive, and unwavering leadership of the highest order is essential.

f. Surface movement, including maneuver, during and after this scale of use will be difficult. Extensive obstacles including contaminated areas, forest blowdown, mass fires, and rubbled cities and towns will result from nuclear fires. As a result of forest blowdown and the probable subsequent burning of dead vegetation throughout wide areas, there may be limited natural concealment during movement and at halts.

Section III. AMPHIBIOUS OPERATIONS

267. General

a. The infantry division, when appropriately reinforced, is suitably organized and equipped to conduct amphibious operations. These operations are highly complex in nature and require extensive planning and preparation and detailed inter-Service coordination.

b. The command of a joint amphibious operation is exercised by either a unified command or a joint task force. The command structure, the command relationships of the joint force, and the

joint force commander are designated by the commander directing the operation.

c. The amphibious task force is the organization formed to assault a hostile shore. It includes a Naval force and a landing force and may include Air Force elements. The infantry division may be the landing force or may be an element of a larger landing force.

d. Detailed information on amphibious operations is contained in FM 100–5 and the 31 series field manuals.

268. Role of the Division

The infantry division may participate in any of the following types of amphibious operations.

a. Principal Types. The amphibious attack involving invasions to obtain lodgment areas from which to carry out further combat operations ashore or, seizure operations to obtain advanced air, naval, or logistical base areas, or to deny the use of the seized areas to the enemy.

b. Secondary Types.

(1) Demonstrations to prompt the enemy into adopting courses of action which are unfavorable to him.

(2) Raids to destroy selected enemy installations, to obtain information, or to capture or evacuate individuals or materiel.

(3) Reconnaissance by minor elements, involving stealth rather than force of arms, to secure information. It may be followed by a planned withdrawal.

(4) Withdrawals for the purpose of redeployment or for evacuation of objective areas.

Section IV. JOINT AIRBORNE OPERATIONS

269. General

a. The organization, equipment, and normal training of the infantry division particularly suit it to the conduct of air-landed operations as part of a joint airborne force. A minimum amount of specialized training is required to prepare its units for this type of operation. Because of their weight and size, some organic items of equipment must be left behind in these operations or substitute items provided.

b. General considerations of airborne, including air-landed, operations are contained in FM 100–5. Detailed information on the planning and conduct of air-landed operations is contained in FM 57–30. Techniques of air movement are contained in TM 57–210 and TM 57–210A.

c. Movements by air are discussed in paragraphs 351 through 354.

270. Command Relationships

The infantry division may participate in a joint airborne operation as follows:

a. Unified Command. The division, by itself, or as a part of a larger Army echelon, may be part of a unified command established by a theater commander. Such a command is established when extensive airborne operations are anticipated, when a broad continuous mission for airborne forces is assigned, and when significant elements of two or more Services are committed to such operation for an extended period of time.

b. Joint Task Force. The division, by itself, or as a part of a larger Army echelon, may be part of a joint task force. A theater commander may establish a joint task force for a specific operation involving significant elements of two or more Services.

c. Attachment for Operational Control. The division, by itself, or as a part of a larger Army echelon, may be attached for operational control to an element of another Service or may have attached to it elements of another Service for operational control.

d. Directed Support. The division, by itself, or as a part of a larger Army echelon, may participate in a joint air-landed operation without modification of the existing command structure. Under such conditions the theater commander or other competent authority provides planning guidance, assigns tasks, and prescribes specific planning and coordinating responsibilities to the component force commanders. Within the guidance and directives of the theater commander, as amplified by their respective component force commanders, elements of the participating Services plan and conduct the operation through mutual coordination and cooperation.

271. Role of the Division

a. Air-landed operations of the infantry division can be conducted alone or in conjunction with parachute assault operations of other units.

b. The infantry division may be air-landed within an established airhead to assist in expanding the airhead, to assume responsibility for a portion of the airhead, to be an exploiting force or part of such a force, or to be a reserve.

c. When conditions permit, normally as a result of nuclear fires, the infantry division can conduct an air-landed operation not pre-

ceded by parachute assault. It conducts the entire operation including the assault, buildup, and exploitation phases by aircraft landing in the objective area. Within their range limitations, Army rotary and fixed wing aircraft can be used to land assault elements of the division prior to its air-landing.

d. The division can be withdrawn from an area by Air Force aircraft, in which case it employs techniques similar to air-landing.

272. Airmobility of the Division

The infantry division is air transportable in medium and heavy transport aircraft except for its medium tanks, tank recovery vehicles, and armored bridge launchers. Organic aircaft must be disassembled for air movement in Air Force aircraft. In air-landed operations, when airlift economy requires, towed artillery pieces are usually substituted for self-propelled howitzers. The division's light tanks and armored carriers can be lifted only in heavy transport aircraft and then on the basis of one such vehicle per aircraft. Consequently, unless strategic or tactical considerations dictate, it is not considered practicable to include these vehicles in air-landed operations.

273. Basic Considerations

a. General. The doctrine for the employment of the infantry division as expressed elsewhere in this manual is valid for air-landed operations. However, the following considerations are included to emphasize a decrease in the capabilities of the infantry division when used in an air-landed operation.

b. Ground Mobility. Because of the absence of its tanks and armored carriers or the substitution of trucks for the latter, and the frequent and normal phaseback of equipment, the air-landed infantry division does not have its usual ground mobility. This must be considered in the training of participating units and in the assignment of missions during execution.

c. Vulnerability to Armor. Because of the absence of tanks in the airhead and the phaseback of equipment, action must be taken to reduce the vulnerability of the air-landed infantry division to attack by enemy armor. Maximum use of terrain obstacles, together with the rapid installation of minefields and other obstacles, helps protect the division under such circumstances. The use of mobile antitank weapons and increased tactical air support further reduce this vulnerability. If available, additional antitank weapons such as M56 90-mm self-propelled guns, antitank guided missiles, and recoilless rifles should be provided to correct the deficiency stemming from the lack of tanks.

Section V. AIRMOBILE OPERATIONS

274. General

a. An airmobile operation is one in which tactical forces and their equipment move about the battlefield in aerial vehicles under the control of a ground force commander to engage in ground combat. The infantry division conducts airmobile operations as a normal part of combat. The size of these operations may vary from those involving the use of a squad to those involving a brigade. The use of airmobile forces in operations has been discussed at appropriate places in chapters 6 and 7. The purpose of this section is to provide guidance for the planning of these operations at division level. Detailed information on airmobile operations and techniques of planning and execution are contained in FM 57–35.

b. The capability of the division commander to conduct airmobile operations enables him to—

(1) Increase the speed and flexibility of all operations.
(2) Pose a constant threat which may cause the enemy to dissipate his forces to protect vital installations and hold key terrain in rear areas.
(3) Extend the area over which he can exert his influence.
(4) Improve his rear area security.
(5) Concentrate his forces quickly and effectively at critical points and redisperse them after accomplishing the mission.

275. Missions

The missions to which airmobile forces are most readily adapted include—

a. Raids.
b. Antiairborne and antiguerrilla operations.
c. Over-obstacle assault operations.
d. Exploitation of nuclear fires.
e. Seizure of key terrain.
f. Blocking or screening enemy avenues of approach.
g. Feints and demonstrations.
h. Reconnaissance and security missions.
i. Counterattack of enemy penetrations.
j. Ship-to-shore operations.
k. Economy of force missions.

276. Basic Considerations

a. The organic airmobile capability of the division is limited to

platoon-sized operations. Operations of greater magnitude require that aircraft be provided by higher headquarters.

b. Aviation support for airmobile forces can be provided by attachment, attachment for operational control for a specified period, direct support, or various combinations of these methods. The lowest echelon capable of effecting control and coordination of the airmobile operation exercises control of supporting aerial vehicles in accordance with the overall plan. This includes coordination of artillery, air defense, air support, Army air traffic with other users of the air space over the area of operations, and the plan of maneuver with those of lower, higher, and adjacent units. Normally, aviation units are employed at division level or placed in support of, or under operational control of, major elements of the division for a specific operation. Normally they are not attached to units below division.

c. Limited airmobile operations can be conducted without full command of the air during periods of limited visibility or by using low level flight techniques.

d. Army pathfinder teams are available from higher headquarters. Pathfinders may be used in all airmobile operations when consistent with security aspects and especially at night or during periods of reduced visibility. Pathfinder teams are trained and equipped to provide terminal guidance to aircraft, to assist in the assembly of troops, to reconnoiter and recommend drop or landing zones, and to reconnoiter and make radiological surveys of areas subjected to nuclear attack. Teams can be delivered to the area of operations by parachute, rotary or fixed wing aircraft, motor vehicle, or amphibious landing; or they may infiltrate as ground patrols.

e. When possible, routes flown by aircraft should avoid areas occupied by enemy forces. Ground patrols or small airmobile patrols are useful in determining the safety of the routes and in securing them.

f. Airmobile operations do not envision the direct assault of heavily defended objectives. Forces land at nearby landing zones and seize the assigned objectives in dismounted attacks. Nuclear or chemical fires can be used to eliminate enemy defenses.

g. A daylight airmobile operation permits more effective air and artillery support than one conducted at night and facilitate assembly of troops and equipment. However, darkness aids tactical surprise and reduces the effectiveness of enemy fire.

277. Planning

a. Planning procedures for airmobile operations are simplified

by the development and use of standing operating procedures (SOPs) for loading. SOP loading plans should be developed in detail at squad, platoon and company level to show the personnel and equipment to be lifted by individual aircraft. General loading plans should be developed for company and battle group to show how many aircraft are required to lift the various units (planning worksheet). These loading plans should be developed for each type aircraft and for several environmental conditions which would vary the lift capacity of the aircraft.

b. Planning for airmobile operations is the same as for ground operations with the following exceptions:

(1) The tactical plan of the airmobile force is developed as in FM 57–35. It includes the commander's priorities for the arrival of units in the objective area.

(2) An air movement plan containing an air movement table and flight route diagram may be prepared as an annex to the operation plan of the unit controlling and coordinating the airmobile operation. The air movement plan is based on and supports the tactical plan of the airmobile force. It includes information pertaining to loading areas, allocation of aircraft to specific units, the designation of flight routes and landing areas, and a time schedule.

c. Plans include the provision of electronic countermeasures to reduce the effectiveness of enemy surveillance and fire control equipment.

d. Fire support planning includes the use of artillery fires, close air support, and armed helicopters to destroy or neutralize the enemy's capability to deliver fires against the force en route to or in the objective area.

e. Link-up planning is discussed in paragraphs 278 and 279.

f. Alternate plans are prepared in event that—

(1) Part of the force fails in its particular mission.

(2) Communication is disrupted.

(3) Weather conditions or enemy action prevents the use of designated routes or landing zones or interferes with landings.

(4) Withdrawal from the objective area becomes necessary or desirable.

(5) Reinforcement of the objective area becomes desirable.

g. The plan for the defense of the airhead is prepared by the force executing the operation.

h. Selection of the hour of landing is influenced by—

(1) Enemy situation and capabilities (air and ground).
(2) Predicted weather.
(3) Visibility (day and night).
(4) Availability of artillery, air, and nuclear fires.
(5) Availability of ground and aerial vehicles.

i. Timing of the operation with respect to ground operations is influenced by the—

(1) Depth of the operation.
(2) Capabilities and limitations of fire support agencies.
(3) Expected time of link-up.
(4) Availability of logistical support.

Section VI. LINK-UP OPERATIONS

278. General

a. A link-up operation entails the juncture of two ground units. Such a juncture may occur in conjunction with airborne or air-mobile operations, during the relief of a cutoff unit, the breakout of an encircled force, or the convergence of separate forces. The infantry division may participate in link-up operations as part of a higher echelon or it may conduct operations within its own resources which require link-up.

b. The initial phase of a link-up operation is conducted as a normal offensive operation. As link-up becomes imminent, coordination and control are intensified, placing definite restrictions on the attacking force.

c. Because forces in an airhead (objective area) or those cut off by enemy action frequently lack staying power, time is often a critical factor.

279. Planning

a. General. Planning for the link-up must be timely. Plans of the forces involved in the link-up are coordinated in advance. Provisions are made for the prompt exchange of information between the two forces. The following are considerations of interest in planning link-up operations.

(1) Command relationships and responsibilities.
(2) Command and staff liaison.
(3) Coordination of schemes of maneuver.
(4) Fire coordination measures.
(5) Coordination of communications plans.
(6) Actions following link-up.

b. Command Relationships and Responsibilities. The headquarters directing the link-up establishes the command relationships and responsibilities of the two forces. The linked up force (hereafter called the stationary force) can be attached to the force making the link-up (hereafter called the link-up force), or the link-up force can be attached to the stationary force, or both forces can come under or remain under control of a higher commander.

c. Command and Staff Liaison. Command and staff liaison between the two forces is essential. This liaison is initially established during the planning phase and is continued throughout the operation. As link-up becomes imminent, additional liaison personnel are exchanged to represent leading units and their supporting artillery. Army aviation facilitates this exchange. In the event that the operation entails link-up with allied forces, provisions must be made for liaison officers with linguistic ability or interperters must be provided.

d. Coordination of Schemes of Maneuver. Objectives, boundaries, axes of advance, and other control measures are carefully delineated. In addition, link-up points are selected at which physical contact between the two forces will occur. These points are mutually agreed upon and should be readily recognizable to the attacking force. Normally they are located where the routes of advance of the link-up force intersect the security elements of the stationary force. Alternate link-up points are established normally where routes of advance cross the FEBA or the airhead line. Enemy action may, of course, force link-up to occur at places other than those planned. The number of link-up points established depends upon the capability of the stationary force, the number of routes being used by the link-up force, nature of terrain, enemy threats to the operation, and other similar factors. Troops manning the points, as well as the units contacting them must be thoroughly familiar with procedures for mutual identification and plans for the rapid passage of the advancing units. Assistance by the stationary force includes removal of obstacles established to hinder enemy movement, providing guides, and reserving of areas for the reorganization of link-up forces.

e. Fire Coordination Measures. Fire coordination lines to become effective on order are established by the headquarters directing the operation. Neither force will deliver fires across the line without prior clearance of the other. As link-up becomes imminent, the fire coordination line is moved as close to the stationary force as possible to allow maximum freedom of action to the link-up force. Additionally, both forces establish bomb lines. The bomb line of the link-up force is separate from the stationary force

in the early stages. As link-up becomes imminent, a single bomb line encompasses both forces; air strikes not controlled by a forward air controller in the area between the two forces must then be cleared by both the link-up force and the stationary force. Normally, the initial fire coordination line will become effective at the time a common bomb line is established. Upon link-up, responsibility for fire support coordination for the force as a whole must be clearly established; responsibility for such coordi-

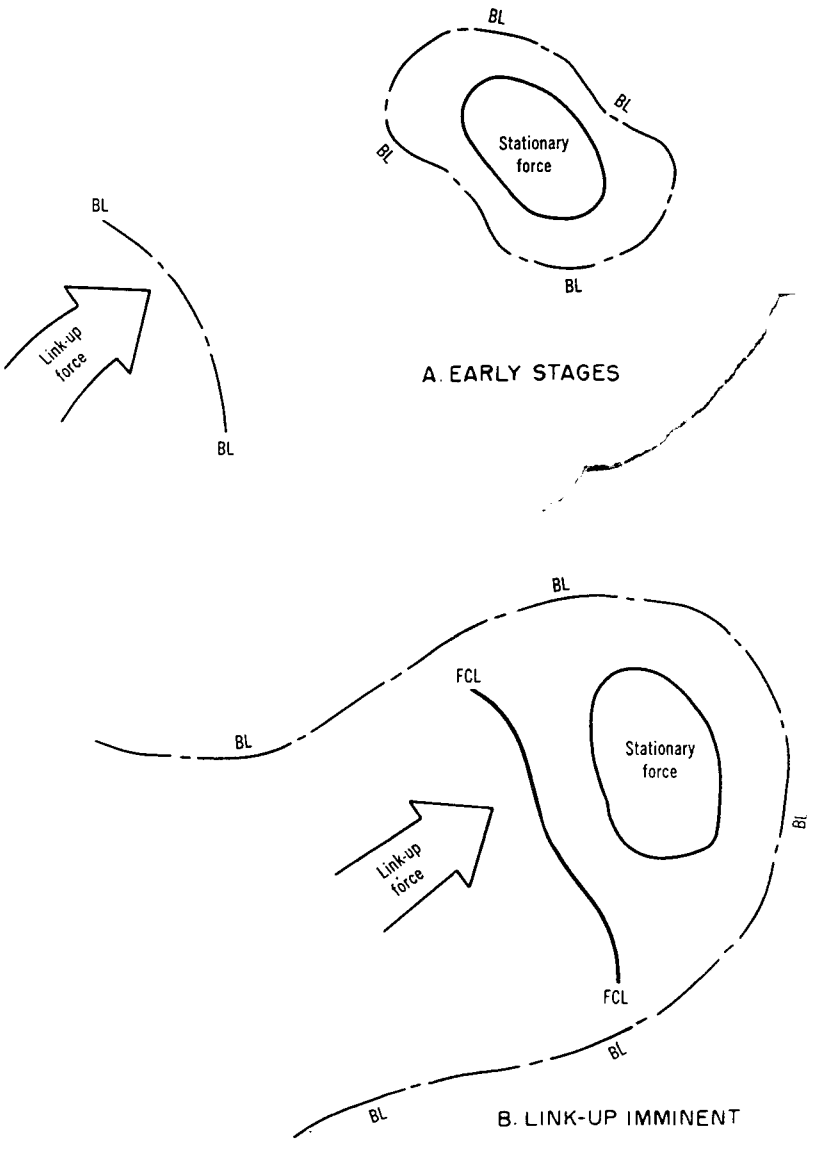


Figure 33. Fire coordination measures in link-up operations.

nation is that of the senior headquarters in the area or of the force having primary interest in the operations following link-up.

f. Coordination of Communication Plans. The communications plans for the link-up operation include channels for radio communication between major units of the two forces. This requires an exchange of call signs, frequencies, and authentication procedures. Army aircraft of both forces can be used to extend the range of communications or to deliver messages between the forces as link-up approaches. The communications plans also prescribe positive identification procedures for use during daylight and darkness. Pyrotechnics, colored smokes, and panels can be used during daylight; and pyrotechnics, infrared devices, and flashing lights during darkness. In addition, armbands, vehicle markings, arm and hand signals, and passwords are of assistance.

g. Actions To Be Taken Following Link-up.

(1) Upon link-up with the stationary force, the link-up force may reinforce or assume the defense of the area, continue the attack in coordination with the stationary force to seize objectives beyond, or pass through or around the stationary force and continue the attack to seize more distant objectives. Provisions thus must be made for relief in place or passage of lines as required. Further, inasmuch as nuclear vulnerability is increased as link-up occurs, particularly if the link-up force passes through the stationary force, provisions for reducing the period of vulnerability or the density of troops and equipment in the areas must be included in plans. For this reason, if possible, it is desirable that the link-up force pass around the stationary force and that its objectives be located well outside the area occupied by the stationary force.

(2) In the case of a link-up operation involving the breakout of an encircled force, the link-up force (in this case the force breaking out) rapidly passes through the forward defensive area of the stationary force to assembly areas in the rear. To speed passage and reduce the period of nuclear vulnerability, multiple routes are provided and suitable priority accorded elements of the link-up force during movement to their assembly areas.

(3) When two moving forces link up, normally only suitable control measures such as boundaries need be prescribed, and the units continue on their assigned missions.

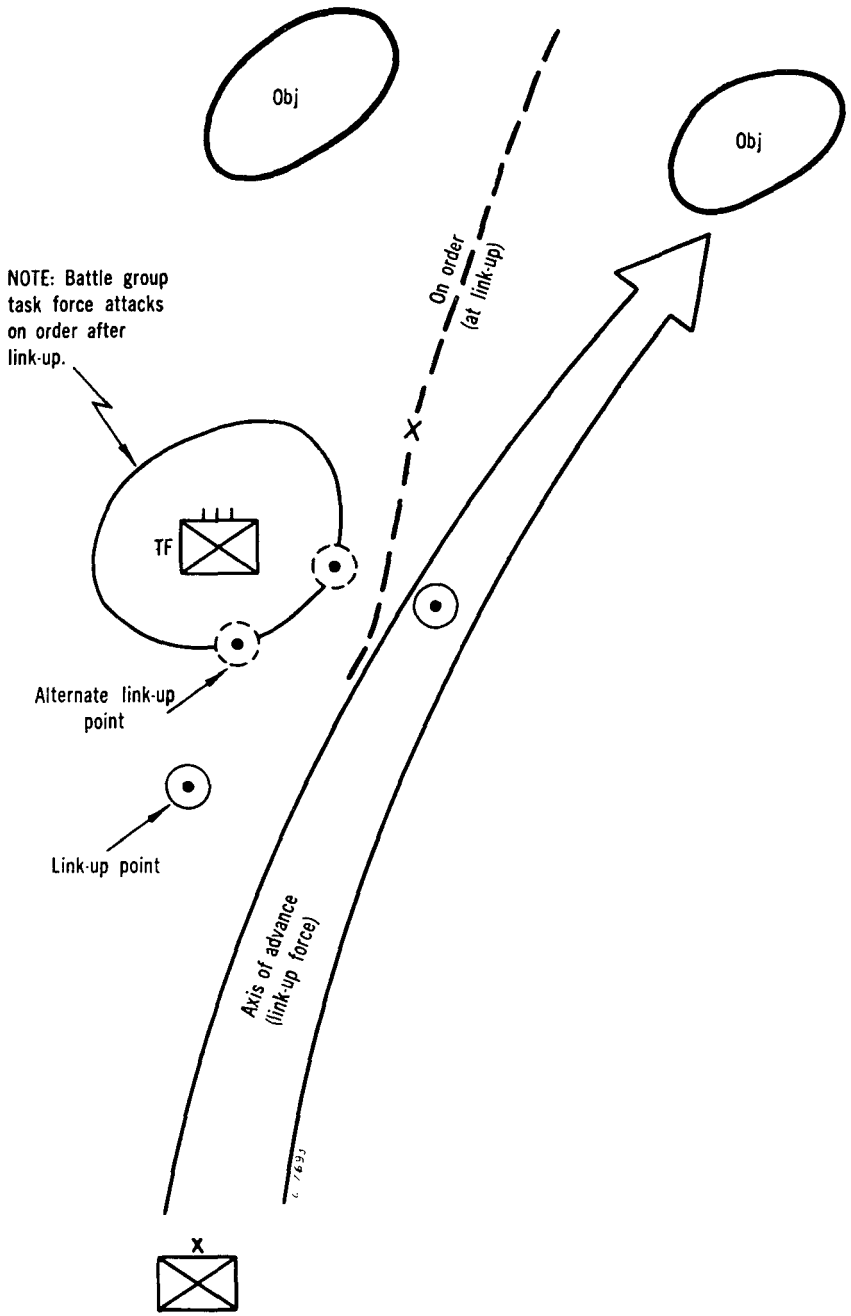


Figure 34. Coordination of maneuver during link-up (both forces continuing the attack under division control).

Section VII. RAIDS, FEINTS, DEMONSTRATIONS, AND RUSES

280. Raids

a. General. A raid is an attack by a force to accomplish a specific purpose within the enemy position with no intention of holding the invaded territory. Raids may be conducted within or beyond supporting distance of the parent unit either in daylight or darkness. The raiding force may move on foot, in armored carriers, in aircraft, in watercraft, or any combination of these means. Raiding forces are particularly vulnerable if they are discovered prematurely, encounter superior forces, or if they are cut off.

b. Purpose. A raid may be conducted to—

(1) Capture prisoners or specific enemy materiel.

(2) Obtain or free key civilians such as scientists or political leaders.

(3) Destroy specific enemy materiel or installations.

(4) Obtain detailed information of hostile units, dispositions, locations, strength, works, intentions, or methods of defense.

(5) Deceive or harass the enemy.

(6) Complete the destruction caused by nuclear fires.

c. Planning and Conduct.

(1) Raids may be ordered by a higher echelon, by the division commander, or by a battle group commander.

(2) Plans and preparations for raids are carefully made and all practicable measures of assistance are worked out and executed in detail. When possible, the raiding force rehearses the raid on ground similar to that over which it will move and under conditions similar to those anticipated during the actual raid.

(3) Withdrawal of the force is planned and executed with the same care and thoroughness as the attack itself.

(4) Security measures are emphasized because the raiding force enters the enemy position and is vulnerable to attack from all directions.

(5) Preparatory and supporting fires, including nuclear fires, can be used as in any attack. Protective fires isolate the objective, prevent or limit counterattacks, and keep open the route of withdrawal. Under some conditions where surprise is sought either by stealth or rapidity of attack and withdrawal, fires are planned but held on call of the raiding force.

(6) Night raids may be either illuminated or nonilluminated. The considerations of the night attack (pars. 195–198) apply to their planning and conduct.

(7) Infiltration of the raiding force enables it to attack deep objectives. Withdrawal of such a force may be expeditiously accomplished by the use of aircraft.

(8) Raiding forces are frequently organized into task forces, particularly when the depth of the operation places them beyond supporting distance of their parent units.

(9) Frequently deep raids may be assisted by friendly guerrillas. This assistance may include preparation of landing zones for aircraft and protection of the area during landing, guides and equipment bearers, diversionary operations, and the isolation of the area to be raided.

281. Feints

a. General. A feint is a shallow, limited objective attack which is conducted to mislead the enemy by drawing the enemy away from the main attack. It may vary in size from a small raid to a sizable secondary attack. A feint may affect the ultimate development of the enemy force. It is most effective when the enemy has a large reserve, when there are several feasible courses of action open to the attacker, and when the force employed is of adequate strength and composition to cause the desired enemy reaction. Planning and conduct of feints are similar to those of other offensive operations.

b. Purpose. A feint is designed to cause the enemy to react in a favorable manner predetermined by the attacker. The attacker may desire the enemy to react physically or to confuse him causing his reevaluation of the attacker's capabilities and intentions. The following are examples of enemy reactions which draw his defenses away from the main attack:

(1) Employ reserve improperly.

(2) Attract supporting fire away from the main attack.

(3) Reveal defensive fires.

(4) Harassment. Frequent raids and feints may confuse the enemy and so accustom him to this type activity that little or no action may be taken when the main attack is actually launched.

c. Time.

(1) *Time in relation to the main attack.* Feints may be conducted before, during, or after the main attack.

(*a*) A feint before the main attack may cause the enemy to move his reserve away from the area of the main attack, attract the enemy's supporting fires so that they may be located, and confuse him by frequent harassment.

(*b*) A feint conducted during the main attack may cause the enemy to divert his attention and possibly forces, including supporting weapons against the feint. Uncertainty in the enemy commander's mind as to which is the main attack may cause him to hold his reserve in its present position pending the outcome of either of the attacks.

(*c*) A feint conducted after the main attack is launched tends to cause the enemy to hold his reserve in its present position because of the new threat and the uncertainty as to the place of the main attack.

(2) *Time of day.* The hour of the day for the feint is based on the time which most favors success of the main attack. In addition, the pattern of previous operations is considered in its selection.

d. Place. The following are considered in determining the area for a feint.

(1) Areas considered during initial planning for the main attack but rejected are logical areas for feints.

(2) The area must be of interest to the enemy.

(3) The area should be at such distance to preclude interference with the main attack.

(4) If the purpose of the feint is to cause displacement of enemy supporting weapons and troops, the feint should be conducted far enough from the enemy units to force their displacement.

282. Demonstrations

a. General. A demonstration is an operation designed to deceive the enemy by a show of force in an area where a decision is not being sought. It differs from a feint in that there is no advance against the enemy. The basic considerations and techniques of planning feints also apply to demonstrations.

b. Characteristics. Fewer troops are required for a demonstration than for a feint, and the force involved need not necessarily be balanced. Withdrawal of demonstrating forces and their subsequent employment elsewhere are possible. Demonstrating forces can extensively use fires, smoke, sonic devices, and decoy equip-

ment. A demonstration lacks the realism of a feint, is more susceptible to identification by the enemy as a deception. It is not a positive means of causing the enemy to react.

c. Use. Demonstrations are particularly effective when the enemy and demonstrating forces are separated by an obstacle. They can be used to good advantage to depict the buildup for operations such as river crossings or attack of fortified areas.

283. Ruses

Ruses are tricks to achieve deception. They are used at all levels in the division. Ruses, such as the use of a few vehicles towing chains to produce dust clouds representing large movements and the movement of a few tanks throughout the area at night, are examples of ruses designed to mislead the enemy by introducing false information into his intelligence system. Other ruses such as the use of loudspeakers in the forward area may divert his attention from other activities.

Section VIII. COMBAT AT RIVER LINES

284. General

The general considerations of combat at river lines are discussed in FM 100–5.

285. Attack

a. When the area through which the division is attacking contains an unfordable river, plans must include provisions to cross without loss of momentum or significant concentration on either bank. The river is approached at maximum speed on a broad front. All existing bridges in the zone of advance are objectives. When bridges cannot be seized intact, hasty crossings are made on a wide front capitalizing on the amphibian characteristics of armored carriers, airmobility, nuclear fires, and improvised means. Advance planning for hasty crossings is essential.

b. A deliberate crossing is conducted when a hasty crossing has failed, when a hasty crossing is not feasible because of the difficulty of the obstacle or the strength of enemy defenses, or when an offensive is resumed at a river line. A deliberate crossing requires corps or army level coordination and concurrent, detailed planning at all levels.

c. Detailed information on river crossing operations is contained in FM 31–60.

286. Defense

a. The fundamentals of the defense of a river line by an infantry division are the same as for other defenses.

b. Unfordable rivers provide strength to the defense. An unwary enemy may mass troops and materiel in preparation for his crossing which then become remunerative targets for nuclear weapons. An attacking force astride a river is especially vulnerable to offensive maneuver.

c. Defense of a river line is facilitated by the organization for defense which best exploits the natural terrain features and the resources available. Only screening forces may be at the river line when the defense is being conducted primarily by nuclear fires and offensive maneuver.

d. The division, when defending a river line, should expect the attacker to move rapidly on a broad front and without pause to attempt to cross at multiple sites using amphibious vehicles, expedient crossing means, and light aircraft. Because of the air-mobile threat, the division must prepare plans for the protection of and counterattacks to regain key terrain well in rear of the river.

Section IX. COMBAT AT FORTIFIED AREAS

287. General

The general considerations of combat in fortified areas are contained in FM 100–5. Detailed characteristics of fortified areas and techniques of combat in them are contained in FM 31–50.

288. Attack

a. Whenever possible, fortified positions are contained by minimum forces while the main force continues the advance to seize more distant and decisive objectives. Reduction of a fortified area may include a siege or an attack from the rear.

b. The special considerations in the attack of a fortified area are:

(1) A primary purpose of a fortified area is to cause the attacker to mass and present a profitable nuclear target. Attack formations and operations must recognize this danger.

(2) Nuclear and chemical weapons facilitate the destruction and neutralization of fortified areas. Surface and subsurface nuclear bursts can create gaps in the fortified area or isolate sections of it.

(3) Detailed intelligence is required upon which to base training, rehearsals, and plans.
(4) Planning and preparation are centralized, but the execution is decentralized to the point that the reinforced infantry platoon is the basic assault unit.
(5) The area selected for penetration must be isolated. Nuclear fires are particularly well suited to this task. Smoke isloates individual strongpoints from the observed fires of other fortifications. Indirect fire weapons destroy camouflage, neutralize and destroy enemy field fortifications and artillery, fire on enemy counterattacks, and screen the movement of assault troops.
(6) The assault elements are tailored to their specific missions and are specifically trained and rehearsed on replicas of the position. Their principal weapons are demolitions, flamethrowers, and direct fire weapons. A fortification neutralized by the assault element is immediately mopped up by a detachment of specially trained troops.
(7) Reserves follow closely behind the assault echelon to exploit the penetration, maintain the continuity of the attack, or defend critical areas against counterattack.
(8) Airmobile forces may be used in conjunction with other attacks of the fortified area principally to block the movement of large general reserves and to attack the fortifications from the rear.
(9) Unless required for use by the attacker, captured enemy armament and fortifications are removed or destroyed to prevent their use if recaptured.

289. Defense

a. The primary purpose of the defense of a fortified area is to cause the enemy to mass and present a nuclear target or to involve him in the reduction of fortified positions, thus dissipating his combat power and making him vulnerable to counterattack.

b. The specific considerations in the defense of a fortified area are:

(1) Fortified positions permit an economy of force in the forward defensive area. This releases proportionately larger forces for the reserve.
(2) The reserve must be provided suitable mobility and be aggressively used if the defense is to be successful.
(3) Fortifications are organized in depth and provide for all-round defense. Field fortifications supplement the fortified area.

(4) The defense is conducted in the same manner as set forth in chapter 7.

Section X. COMBAT IN BUILT-UP AREAS

290. General

The general considerations of combat in built-up areas are contained in FM 100–5. Detailed characteristics of built-up areas and techniques of combat in them are contained in FM 31–50.

291. Attack

a. When possible, built-up areas are bypassed and isolated. When this is impossible, methods applicable to reduction of fortified areas are used.

b. Terrain dominating the approaches is seized to isolate the town. Mobile forces, including airmobile forces, are best used for the seizure of such terrain. Objectives within the built-up area are selected to divide the enemy defense.

c. The advantages gained through the use of nuclear weapons and intense nonnuclear bombardments must be weighed against the creation of obstacles to the assault elements.

d. Measures to control the civilian population are essential.

292. Defense

a. Since built-up areas are obstacles to the movement of friendly counterattack forces as well as to the attacking enemy, consideration should be given to defending outside the built-up area. Under some conditions, elements of the division may hold towns while the remainder of the division counterattacks in the open.

b. The defense of a built-up area is organized around key terrain features which preserve the integrity of the defense and provide ease of movement to the defender. Subterranean systems may facilitate the movement of forces and may provide protection against nuclear attack. They are incorporated in the organization of the defense. Maximum use is made of rubble and other obstacles. Defenses are prepared in depth to facilitate continuous defense throughout the area.

c. Plans should provide for the control of the civilian population, and the use of friendly elements in the preparation of defensive positions. Evacuation of civilians from the area should be considered.

Section XI. COMBAT IN EXTREME TERRAIN AND WEATHER CONDITIONS

293. General

a. The infantry division is generally organized and equipped for combat in extreme terrain and weather conditions. Under certain circumstances, additional or substitute equipment and specialized training may be required. There is generally an increased requirement for engineer, logistical, and maintenance support and efforts.

b. Difficult terrain may tend to slow the momentum of the division's operation or canalize its movement with an increase in the susceptibility to location and identification by the enemy for attack by nuclear weapons. In some instances, however, this terrain may provide natural concealment and protection from the effects of nuclear weapons.

c. The use of difficult terrain by the division may increase the opportunities for surprise. Areas of difficult terrain favor raids and guerrilla operations.

294. Woods, Swamps, and Lake Areas

a. Operations in woods, swamps, and lake areas in some respects are similar to those in fortified or built-up areas. Extended and thick woods provide good concealment and camouflage but limit visibility and fields of fire and hamper observation and control. However, large swamps or lakes within the area may provide good observation and fields of fire. Woods limit mobility. Trafficability in swampy areas is changeable as a result of rain, dry weather, or freezing. At times a swamp may be impassable, at other times, it may be an excellent route of advance. Similarly frozen lakes can be used as routes of movement. Nuclear weapons used in wooded areas may create extensive blowdown or, when conditions are favorable, cause forest fires.

b. Woods and swamps favor raids and guerrilla operations. Some woods because of their size or location are naturally strong defensive areas. Small wooded areas in open terrain are easily neutralized by fire or smoke.

c. Whenever possible, heavily wooded areas, swamps, and lake areas are bypassed. If it is necessary to clear such an area, it is encircled by mobile units and cleared by infantry.

d. The use of extensive wooded areas may add strength to a defense. However, such areas generally are not conducive to a defense based on maneuver. Further, the fire hazard of enemy nuclear weapons must be carefully considered.

295. Steppes

a. Steppes are vast, untilled wastelands of southeastern Europe and west-central Asia. They are flat, broken only by ravines in many cases having high, steep slopes overgrown with brush and thickets; few human settlements; and some isolated clumps of trees. The steppe grass can provide concealment for individuals, but concealment of vehicles, guns, and similar material is completely lacking. Except for the ravines, there is no natural cover. Water supply on the arid steppe is difficult.

b. During late spring through early fall, the trafficability of the steppes is ideal for motorized and mechanized operations. The only obstacles are the ravines. During the summer the steppes are dry and susceptible to fires; either nuclear weapons or large-scale of incendiaries may cause large-scale steppe fires destructive to troops and supplies. Winters are severe. There are no natural means of breaking the wind or banking snow which is whipped across the plains. There is a constant struggle against drifting snow. During the thaws, the ravines become streams, small depressions become ponds, and large areas of flatland are covered with water. The thawed ground is soggy. Movement is exceedingly difficult.

c. Infantry division operations in steppes are influenced by—

(1) Lack of cover and concealment against air attack.

(2) Increased need for security and deception measures because of the difficulty of concealment.

(3) Increased problems of administrative support.

(4) Increased emphasis for speed of movement and accompanying requirement for additional means of mobility.

(5) Increased reliance for mines or surface burst nuclear weapons to impede or canalize enemy movement.

(6) Danger of steppe fires during the dry season.

296. Mountains

a. The general considerations of mountain operations are contained in FM 100–5. Detailed information on mountain operations, the employment of the arms and services, and training are contained in FM 31–71 and FM 31–72.

b. Only minor modifications are required in the organization of the infantry division for combat in the mountains. Increased emphasis is placed on supply and movement by Army aircraft and the elimination of vehicles and weapons not suited to the terrain. In some areas animal transport may be available from

local sources. In alpine terrain, specialized technical training and equipment are required.

c. Decentralized command is essential in mountain combat.

d. Time and space factors vary with the configuration of the terrain, altitude, scarcity of roads, and season. Movement is measured in time rather than miles. Orders must be issued early because of the longer time and increased difficulty of moving units and supplies.

e. Deployment of forces is restricted by the terrain. Small forces can impede, harass, or prevent the movement of large enemy forces. Frequently, mutual support between adjacent units is limited or impossible. Movement and employment of reserves is slow and difficult.

f. Tanks are usually of limited value in mountain terrain. The use of heavy infantry weapons and artillery is hampered by their bulk and weight, considerable dead space in their fields of fire, and difficulty of observation. However, high-angle fire weapons assume major importance in support of units operating on heights. The importance of close combat increases as the ability of other methods decreases.

g. Attacks are characterized by centralized planning for execution by semi-independent tactical groupings. Objectives are frequently the heights which dominate the passes which permit movement through the mountains. Each dominant height must be secured before movement to the next. Whenever possible, attacks should strike the enemy in flank or rear. Surprise may be achieved by movement of small, mountain-trained forces. Movement of counterattacking forces is slow and difficult; timing is highly important.

h. Mountainous areas favor guerrilla warfare.

297. Deserts

a. The general considerations of desert combat are contained in FM 100–5. Detailed information on desert operations, the employment of the arms and services, and training are contained in FM 31–35.

b. The doctrine expressed in chapters 6 and 7 for offense and defense apply without change in desert operations. The freedom of movement afforded by the desert, however, increases the depth of objectives and the frontages of units, and generally favors the use of wide envelopments by highly mobile forces. The lack of concealment increases the need for dispersion and deceptive measures.

c. For desert operations, the infantry division is provided additional mobility by attaching armored carriers, trucks, tanks, and Army aviation.

d. Administrative support problems are increased in the desert as a result of the great distances involved, extremes of temperature, shortage of water supply, and increased maintenance requirements.

298. Jungle

a. The general considerations of combat in the jungle are contained in FM 100–5. Detailed information on the characteristics of jungles, the employment of the arms and services, and training are contained in FM 72–20.

b. Combat in jungles is conducted at extremely close quarters by relatively small bodies of troops. Proper training and hardening of troops to jungle conditions, together with suitable equipment and initiative of individual and small unit leaders, are essential. Control of units and observation are difficult.

c. Administrative support problems are increased in jungle operations. Supply and evacuation by air are of great value. Maintenance of equipment is difficult. Sanitation and health measures are important. Engineer requirements are increased.

d. Roads, trails, and rivers are key terrain in jungle operations.

e. The closeness of vegetation and difficulty of observation increase the need for security which often can be obtained only through the use of security detachments.

f. Airmobile units can be used to outflank enemy defensive positions.

g. Jungle areas are conducive to raids and guerrilla warfare.

299. Defiles

Defiles are natural or artificial terrain features which canalize movement. Major forces passing through a defile are vulnerable to air and nuclear attack. Suitable air defense measures must be provided the division from higher echelons. In addition, provisions must be made for the rapid uninterrupted passage of units. This involves the use of highly mobile forces including airmobile units to reconnoiter the defile and establish suitable security in or on its flanks and at its exit. Surveillance and aerial reconnaissance are valuable in warning of the approach of enemy units. Close command control and traffic control must be exercised to prevent inadvertent concentration of the division in the defile area.

300. Northern Operations

a. General considerations of northern operations are contained in FM 100–5. Detailed information on the Arctic and Subarctic, the employment of the arms and services, and training are contained in FM 31–70 and FM 31–71.

b. The area of northern operations is that portion of the earth that lies north of the 50° isotherm (i.e., a line north of which the mean temperature for the warmest 4-month period of the year is under 50° F.). It includes both the Arctic and the Subarctic.

c. The infantry division when conducting operations in northern latitudes requires specialized training and special equipment.

d. Offensive and defensive operations are conducted as in other climates. They are, however, affected by considerations which include long hours of daylight and the heat and dust of summer; long nights and bitter cold and storms of winter; mud and morass of the transition periods of spring and autumn; the disrupting effects of natural phenomena; the scarcity of roads; and vast distances and isolation. These considerations adversely affect but do not totally restrict mobility, firepower, and communications. The ability to move cross country is essential in all operations.

e. Training, equipment, and techniques of the division when operating in northern latitudes are affected by the following factors:

(1) *During the winter.* The cold and snow of winter create a constant need for heated shelter, cause difficulty in fortification, increase dependence on administrative support, and require special winter clothing and equipment. The division when provided with and trained in the use of oversnow equipment including skis and snowshoes can conduct highly mobile operations. Aircraft can use frozen lakes and rivers for landing areas.

(2) *During the summer.* Extensive swamps, muskey areas, lakes, and rivers require special equipment such as boats and low ground pressure tracked vehicles. Almost continuous daylight requires special care in movement.

(3) *During the spring breakup.* Thaws weaken ice on waterways and swamps. Roads become impassable and the surface of the ground thaws. The resulting poor trafficability may seriously reduce extensive surface movement.

(4) *During the fall freeze.* The ground and waterways frequently freeze prior to heavy snowfall increasing cross-country mobility. Early heavy snows, however, insulate

the ground and delay its freezing. This condition impedes mobility.

(5) *During all seasons.* The scarcity of roads affects large-scale operations and increases the difficulty of administrative support. Limited map coverage causes the need for effective navigation and control measures.

301. Snow and Extreme Cold

a. The general considerations of combat in deep snow and extreme cold are contained in FM 100–5. Detailed information on operations in snow and extreme cold is contained in FM 31–70 and FM 31–71.

b. Operations of the snow and extreme cold of the northern latitudes are discussed in paragraph 300.

c. Conditions of extreme cold and snow are also encountered during the winters in other areas of the Temperate Zones and at high altitudes. Techniques applicable to northern operations are adapted as appropriate during combat in Temperate Zone winters.

d. During operations in deep snow the division should be provided suitable oversnow mobility including vehicles, skis, and snowshoes. Provisions must be made for suitable snow clearance from roads and trails.

e. During periods of cold, suitable safeguards for the prevention of cold casualties must be enforced. Suitable clothing and enforcement of clothing discipline are essential. Heated shelter must be available to troops, both combat and service. Units and individuals should be frequently rotated from duties in exposed areas where individual and unit preventative measures are difficult or impossible to accomplish.

302. Mud

a. Mud is encountered for extended periods of time during spring thaws and during rainy seasons throughout large areas of the world. Unsurfaced roads become impassable and the countryside turns into a morass. Such a condition seriously impedes and, in some cases, stops ground movement and hinders both operations and administrative support activities. The substitution of light equipment for heavier items and the use of low ground pressure tracked vehicles may partially alleviate the situation.

b. During such periods full-scale operations may not be possible. The inability to move counterattack forces on the ground and the slow rate of movement of enemy forces may tend to cause defensive operations to become static in nature. Offensive action may consist of successive limited objective attacks.

c. Reliance for supply and evacuation may, of necessity, be placed in the use of rotary-wing aircraft.

Section XII. SITUATIONS SHORT OF WAR

303. General

a. Military contingencies arising from cold war will often require the infantry division to conduct active operations short of overt war. These types of operations are referred to as Situations Short of War.

b. The infantry division can perform the missions normally required of combat forces in situations short of war. Its organizational flexibility and wide range of available combat power enable the division to adapt itself to the variety of conditions which it may encounter. It can be employed independently or as part of a larger force. When employed independently, the division should be reinforced to insure its sustained logistical support.

c. In preparation for, and execution of, a mission of this type, the division commander should indoctrinate division in civil-military relations, the limitations on application of force, and social conditions, customs, and political situation in the area of projected employment. Also to be emphasized are training in riot control, extensive patrolling, counterinfiltration, and widely dispersed operations. Commanders must assure proper conduct and disciplinary response of their troops as misconduct may seriously affect relationships with the host country.

304. Special Considerations

a. Limitations on Authority. When employed on foreign soil in a situation short of war, specific limits are set on the authority of the division commander and on the individual commanders of divisional elements by international agreements, such as the status of forces agreements, promulgated at the national level for the particular area of operations. These limitations will often restrict the tactical freedom of action of the unit commander and at times seriously reduce the combat effectiveness of his unit. These are major considerations when tactical decisions are required, and may dictate the force to be employed or the manner of its employment. Examples are restrictions on the use of firepower, roads, buildings, installations, railroads, and terrain. Civil officials of the host nation usually retain their authority, thus requiring time-consuming coordination procedures to ensure the maintenance of good relations with the local populace.

b. Civil Affairs. The division and subordinate commanders must place special emphasis on the civil affairs aspects of their missions. Civil affairs personnel and teams especially trained in civil affairs should be placed with key civilian control agencies to provide continuous liaison and to insure good relations. The division must be reinforced with appropriate civil affairs units in preparation for such missions. The impact of the limitations on authority discussed in *a* above, can be materially reduced by efficient civil affairs operations. At division level, the civil affairs annex to the operation order should be used to implement the provisions of an existing status of forces agreement, if any, or other international agreement.

305. Operations

a. General. The infantry division operating in a situation short of war will be confronted with a wide range of unpredictable factors, including local political conditions in relation to local and US national policies; attitudes of local populations, law enforcement agencies, and native armed forces; potential enemy covert and overt capabilities; terrain and other environmental conditions; and command arrangements. This demands a high degree of professional competence on the part of the division commander and staff and all subordinate commanders.

b. Planning.

(1) In a situation short of war, the division is involved in preparing plans for three types of conditions: conduct of current operations and training, planning for future situation short of war missions, and planning for future combat operations in event of war. This planning effort will occupy much of the staff's time at both division and subordinate levels and may require that the commanders at division, brigade, division artillery, and battle group establish planning groups.

(2) The operational element of the staff is used to supervise the execution of the current mission and training. Plans for training must include provision of time, facilities, and areas for individual and unit training aimed at the maintenance of combat proficiency.

(3) Planning for future missions in situations short of war and for future combat operations in event of war must be initiated immediately on arrival in the area, and must be conducted continually and concurrently with the execution of current security missions and training. Recon-

naissance to support these plans will require considerable time of the staffs and subordinate commanders. These operational plans should also be rehearsed when time and the situation permit. They also must be kept up to date based on daily intelligence.

c. Training. If the division is required to continue for an extended period on a mission in a situation short of war, its capability for coordinated combat action must not be allowed to suffer as a result of personnel losses and lack of practice of combat skills. Therefore, individual and unit training exercises must be planned and conducted concurrently with the execution of the mission. Reserves at all echelons should be kept active and proficient through participation in these training exercises. Rotation of reserve elements with those required to be committed can insure effective periodic combat training of units through battalion and battle group level.

d. Control. The problem of control increases when the division is forced by the mission to deploy its elements over wide areas. In average terrain, the division communications system can provide effective contact with major subordinate headquarters. Extremely rough terrain will reduce this capability. Major subordinate commanders are given mission type orders under which they have freedom of action within the limits of international agreements and local military restrictions. Other control measures such as boundaries and assembly areas are applicable.

e. Fire Support. The general requirement for application of minimum necessary force to avoid unwarranted alienation of local populations can seriously reduce the availability of normal fire support to the maneuver elements. The division commander will often find it necessary to limit or even prohibit the use of field artillery, primary tank guns, mortars, and rocket launchers except under specific emergency conditions. Thus, the tank, infantry, or cavalry unit commander may be forced to use small arms and manpower alone to accomplish the mission.

f. Administrative Support.

(1) Certain aspects of administrative support for operation in situations short of war require special consideration. If the division is held relatively concentrated, the administrative support problem is minimized. However, when its elements are widely deployed, the distances involved present conflicting requirements for transportation and security. The desirability of concentrating to facilitate security of administrative units and supplies must be balanced against the need to fragment supply

points and maintenance units to make support readily available to the user and to reduce transportation and distribution requirements. Limitations on the availability of security troops and transportation are the controlling factors over decisions in this area.

(2) Administrative support planning for future combat operations in event of war must provide for rear area security and area damage control. Intelligence efforts should be directed toward revealing the enemy's potential for infiltration operations and nuclear warfare, both of which will offer major threats to division rear area operations.

(3) The deployment of administrative units and supplies must be coordinated with all types of operational requirements and provide for sufficient flexibility to minimize the need for major relocation to support the various types of operational plans.

306. Unit Capabilities

a. The subordinate units of the infantry division have characteristics and capabilities whch make them particularly adaptable to the varied operational requirements in situations short of war.

(1) The battle groups provide the bulk of the troops necessary for patrol operations (mounted or dismounted), area search and security, outposts, strongpoints, and control posts, and for action in mountainous terrain, jungle, or swamp. Battle groups are well suited for the control of mobs and for the suppression of riots and civil disorder. One or more battle groups can make an impressive local show of force on parade, particularly when accompanied by armor and artillery units. The timing and route of march should be carefully selected for maximum effect. Mobile task forces formed by units organic to the battle group and provided with helicopter, armored carrier, and other transport can provide the basis for quick application of measured force.

(2) The armored cavalry squadron, because of its organization, mobility, and excellent communications, can provide reconnaissance and security forces capable of being deployed over wide areas.

(3) The armor battalion is an excellent show of force unit. Reinforced with infantry, armor units provide powerful mobile forces with extensive communications. When employed with dismounted infantry, tanks are effective in quelling riots and civil disturbances without resorting to their full firepower capability.

(4) The division aviation company can conduct day and night surveillance operations over wide areas and provide liaison and courier service. It can operate from hastily prepared airstrips within protected areas. Air vehicles can be used to supply isolated outposts and detachments located away from the major elements of the division.

(5) The engineer battalion may be required to construct or supervise the construction of airfields, fortifications, bridges, and roads, and to perform mine detection and removal. It can also provide technical assistance to civil agencies. In emergencies it may be employed on security and control missions.

(6) The signal battalion will normally be required to provide a communications network. Extensive reliance must be placed on radio because of problems involved in maintenance of wire communication systems, particularly in partisan infested areas. Communications with subordinate elements can be maintained over extremely wide areas by use of relay.

(7) Administrative support units are well suited to provide humane relief services such as the issue of food and clothing, and medical treatment of the population in support of civil affairs operations. Assistance of this type, when units and supplies are available, facilitates accomplishment of the division mission.

(8) The flexible organization of artillery units facilitates artillery support of outposts and detachments. Organic nuclear weapons delivery means are particularly effective in a show of force. When not required in its primary role, the division artillery is capable of executing security and control missions as a major subordinate element of the division.

(9) The military police detachment, cooperating with civil police, can materially facilitate the accomplishment of the division mission through control of division personnel and vehicles and through specific assistance to civil authorities.

(10) The civil affairs unit provides the division commander with an agency for the conduct of required civil affairs operations including community relations, liaison, advice, and assistance to the civilian population, its government, and institutions.

b. Air transportation of units facilitates their employment and redeployment over wide areas when sufficient organic or supporting aircraft are available.

Section XIII. GUERRILLA WARFARE

307. General

a. Guerrilla warfare is conducted primarily by indigenous forces organized on a paramilitary or military basis to attack, harass, and delay the enemy. Guerrillas may or may not operate in conjunction with friendly conventional forces and special forces. Guerrilla operations may also include tactics such as passive resistance, espionage, subversive, sabotage, diversion, reprisal, and propaganda.

b. The infantry division may conduct operations in conjunction with friendly guerrillas. Under exceptional circumstances as in the case of bypassed forces, elements of the division itself may conduct guerrilla-type operations. The division must protect itself at all times against hostile guerrillas and may be comitted to the reduction or elimination of large scale guerrilla activity.

c. The purpose of this section is to discuss aspects of operations in conjunction with friendly guerrillas and the use of the division in antiguerrilla operations. The protection of the division against guerrilla attack is contained in chapter 5.

d. Additional information concerning guerrilla and antiguerrilla warfare is contained in FM 31–15, FM 31–21, and FM 31–21A.

308. Operations in Conjunction with Friendly Guerrillas

a. General. If the division area of influence overlaps an area in which U.S. sponsored guerrillas are operating, the division may request that the guerrilla forces execute missions which assist its operations. When link-up with U.S. sponsored guerrilla forces becomes imminent, the operational control of the forces will become the responsibility of the appropriate Army level which will exert its control through the designated special forces detachment. This operational control will continue after link-up until tactical developments dictate otherwise. Upon link-up, guerrilla units may be attached to the division.

b. Special Forces. Normally guerrilla forces are coordinated by special forces detachments. When this is the case, a special forces liaison party assists the division by keeping the staff posted on the status of the force, recommending appropriate exploitation of its capabilities, and providing communications with the special forces operational detachments accompanying the force. Under certain conditions, special forces detachments will not be available and

the division will have to deal directly with the guerrilla force or provide liaison parties to the force.

c. Considerations in the Use of Guerrilla Forces. The organization, method of operations, capabilities, and limitations of the guerrilla force must be known by all commanders and staffs dealing with the force. Problems of supply and support must be anticipated. The existing guerrilla standing operating procedures, ranks and grades, and organizational structure must be respected. Recognition by award of decorations or other expression of appreciation is essential to the maintenance of guerrilla morale. Plans must include provisions for overcoming language barriers.

d. Mission for Guerrilla Forces. Missions assigned to guerrilla forces must consider the guerrilla units' equipment, state of training and organization, and available logistical support.

(1) Missions before link-up—
  (*a*) Raids.
  (*b*) Interdiction of enemy lines of communications.
  (*c*) Assistance to division patrols, raiding parties, and attacks by airmobile forces.
  (*d*) Gathering of information, including the location, size, and composition of potential weapons targets.
  (*e*) Reporting of damage information.
  (*f*) Employment of chemical and biological agents through covert means.

(2) Missions during the period of link-up include—
  (*a*) Interdiction of the division's area of operations.
  (*b*) Assistance in or seizure of objectives and preventing enemy destruction of key installations.

(3) Missions after link-up include—
  (*a*) Guides and patrols.
  (*b*) Protection of exposed flanks and gaps.
  (*c*) Mopup of areas bypassed by division units.
  (*d*) Conventional combat providing the force's training and organization so permit.
  (*e*) Assisting civil affairs units.
  (*f*) Assisting in the apprehension of collaborators and spies.
  (*g*) Guarding or protecting bridges, supply dumps, and other vital installations.

e. Assistance to Friendly Guerrilla Forces.

(1) Prior to link-up guerrilla forces are provided logistical support by special forces. In addition they make maximum use of supplies obtained from both civilian forces and the enemy. Upon link-up, logistical support of these

forces may be the responsibility of the division. Logistical support may include but is not limited to medical supplies, communications equipment, arms and ammunition, hospitalization and evacuation, and under some conditions, transportation. In a highly developed force there may be a requirement for motor vehicle fuel. Maximum use should be made of captured stocks.

(2) Communications means are normally provided by special forces. The division, however, must insure that upon link-up the communications available to the force are adequate for anticipated missions and must provide suitable maintenance and expendable supplies.

(3) Guerrilla forces may be reinforced with fire support, aviation, and other tactical and tactical support elements as required. If the mission assigned a guerrilla force entails conventional type combat, adequate support, particularly artillery and antitank protection, must be provided. Prior to link-up, airmobile or surface-infiltrated elements of the division may assist guerrilla units in the accomplishment of specific missions.

f. Demobilization. Division civil affairs units assist in the reorientation, demobilization, and integration of guerrilla forces into the civilian environment when the need for such forces no longer exists.

309. Antiguerrilla Operations

a. General.

(1) Infantry division missions in antiguerrilla operations may include—

(*a*) Offensive action to destroy or capture guerrilla forces.

(*b*) Control of a hostlie populace to prevent aid to guerrillas.

(*c*) Security of vital military and civil installations.

(2) The infantry division may conduct antiguerrilla operations as a part of a regularly assigned mission, or it may conduct this type operation as a primary mission.

(3) Operations to eliminate bypassed enemy conventional forces may resemble antiguerrilla operations.

b. Basic Considerations.

(1) Guerrilla units cannot exist for long without the support of some segment of the civilian population, whether such support is given willingly or is gained through coercion and terrorism. Antiguerrilla operations, therefore, must

include appropriate measures to eliminate civilian support of the guerrillas.

(2) Other weaknesses attributed to guerrilla forces are disputed command authority, lack of efficient organization, poor communications, and limited arms and ammunition supply. Division antiguerrilla operations are designed to verify and take advantages of these weaknesses.

(3) Guerrilla forces do not follow an established pattern of operations, are elusive, and are difficult to fix in position in order that they can be captured or destroyed. Accurate and timely intelligence of guerrilla activities is therefore both critically needed and difficult to obtain. In addition to making maximum use of organic and supporting intelligence means, the division must make every effort to develop effective information sources among the local civil police, the civil populace, and friendly guerrilla forces.

(4) Division antiguerrilla operations are characterized by aggressive action. Purely defensive security measures allow a guerrilla movement to grow and become strong. The use of defensive measures alone is justified only when the lack of adequate forces prohibits offensive operations. Offensive action should be continuous and not be interspersed with periods of inactivity except when utilized as a deceptive measure.

310. Employment of Divisional Units in Antiguerrilla Operations

a. General.

(1) In antiguerrilla operations, the infantry division makes maximum use of small, highly mobile, combined arms task forces which can find, fix, and fight elusive guerrilla forces.

(2) Airmobile forces are of great value in antiguerrilla operations. Airmobile units may be landed inside the security perimeters of the guerrillas, thus increasing surprise. Use of airmobile units permits encircling movements that terrain and routes of approach would otherwise prevent. They may be used to cut off guerrillas being pursued after an attack or to relieve a distant detachment besieged by guerrillas.

b. Battle Group. The difficult terrain usually inhabited by guerrilla forces causes prime reliance to be placed upon the infantryman in antiguerrilla operations. The battle group and its com-

panies form efficient nuclei around which the required mobile task forces can be formed. The organizational flexibility of battle group facilitates control of the dispersed operations characteristic of antiguerrilla warfare.

c. Armor Battalion. The mere presence of armor is demoralizing to guerrilla forces. The poor terrain normally occupied by guerrilla forces, however, may restrict the use of armor. Armored vehicles offer protected communications, effective mobile roadblocks, and convoy escorts. Armor used against guerrillas must be closely supported by infantry. Guerrillas may be skillful at improvising means to destroy or cripple tanks and may have recoilless weapons and light rockets.

d. Armored Carrier Companies. Where terrain permits their use, armored carriers are employed to increase the mobility of task forces operating against guerrillas. Their armor protection and mobility permit rapid redeployment of units between those areas where troops are required to fight on foot. Armored carriers may be required for resupply purposes when supply routes to dispersed positions are not fully controlled by the division.

e. Cavalry Squadron. The cavalry squadron is well suited to antiguerrilla operations. Its combined arms organization are readymade task forces capable of antiguerrilla combat. The extensive communications and mobility of the squadron enhances its ability to perform the reconnaissance and security type missions required in antiguerrilla warfare.

f. Division Artillery. The disposition and tactics of guerilla forces seldom present mass targets to artillery. Rather, many small and fleeting targets are presented. Division artillery is decentralized to support the operation of widespread mobile task forces until such time as the guerrilla forces are compressed into target areas that warrant massed fire.

g. Aviation Company. In addition to movement and resupply of troop units involved in antiguerrilla operations, the division aviation company is a principal means for collection of intelligence information concerning guerrilla operations. The aerial surveillance platoon, operating under division control, can quickly develop suspect areas which can then be reconnoitered by ground elements if required. This procedure adds direction to the ground reconnaissance effort by placing it in areas where guerrilla forces are most likely to be found.

h. Attached and Supporting Elements. When performing antiguerrilla missions, the division is normally assisted by civil affairs units, U.S. Army Security Agency units, and intelligence and coun-

terintelligence units. In addition, military units and installations in the area provide their own local security and assist in the detection and warning measures of the area. Local civilian police or gendarmerie forces may secure vital civilian installations and protect the local populace. If the enemy guerrilla units are being assisted by a sponsoring power, air defense and air units assist the operation by detecting and destroying enemy aircraft involved in supplying these units.

i. Special Units. When the infantry division is committed to antiguerrilla operations for an extended period, special antiguerrilla units may be organized, equipped, and trained to combat guerrilla forces by using guerrilla methods. Under many conditions these units are more effective than larger conventional troop units. To prevent detection, they avoid contact with the local populace. They move at night and remain in concealed camps during the day. Through necessity, most of their operations are conducted during darkness. At frequent intervals—specifically after an encounter or upon detection—they move to new concealed camps.

j. Administrative Support Elements. Administrative support installations, particularly supply and evacuation installations, must be located to facilitate support of dispersed operations. When antiguerrilla operations are conducted against guerrilla redoubts and safe areas, the characteristically difficult terrain makes supply and evacuation of division elements a problem. Maximum use is made of organic and supporting aircraft to accomplish these functions. When resupply by air or other means is infeasible, the division must resort to hand carry. This system is slow and costly in manpower. Consequently, maximum use is made of available local labor.

311. Sequence of Antiguerrilla Operations

a. Operations against guerrilla forces generally follow a regular sequence. The division commander, when charged with combating hostile guerrillas and extending control over an area, moves his force into the area and establishes local bases of operations with appropriate security and administrative measures.

b. Control over the civil population is then established as required to separate guerrilla forces from their source of support.

c. Offensive operations are next launched against areas controlled by hostile guerrilla forces. These operations are directed against guerrilla units, their communications, and supply. Offensive action is continued to prevent reorganization and resupply and to destroy dispersed guerrilla groups. Emphasis is placed on

the capture or destruction of guerrilla leaders and staffs, and their civilian supporters. Propaganda is used to undermine guerrilla morale and induce surrenders.

d. Operations are continued until the hostile guerrilla forces have been destroyed and control is extended throughout the area. Lulls in guerrilla operations or failure to establish contact with guerrilla forces should be regarded with suspicion. Lack of contact may well indicate inadequate measures rather than complete success. Stopping antiguerrilla operations too soon may nullify months of rugged fighting. Continuous pressure must be maintained until the guerrilla menace ceases to exist.

312. Conduct of Offensive Action Against Guerrilla Forces

a. General. Offensive actions against enemy guerrillas may be broadly classified as encirclement, attack, and pursuit.

b. Encirclement.

(1) *Occupation of encircling positions.* The encirclement of guerrilla forces, whether they are large or small, is usually the most effective way to destroy them completely. The encirclement is made in depth with adequate reserves and supporting arms to meet possible guerrilla attack in force and to block all avenues of escape. Complete and effective encirclement operations require a relatively large number of troops regardless of the number of opposing hostile guerrillas involved. If terrain or inadequate forces preclude the effective encirclement of the entire guerrilla area, then only the most important part of the area is encircled. The planning, preparation, and execution of the operation are aimed at sudden, complete encirclement that will totally surprise the guerrillas. Support and reserve units are committed to insure sufficient density and depth of troops and to establish and maintain lateral contact between units. Throughout the early phases of the advance to the line of encirclement, speed is emphasized. Upon arriving on the line of encirclement, units occupy defensive positions. The most critical periods in the execution of the operation are during the initial phase of occupying the line of encirclement and at night. Large guerrilla formations can be expected to fight violently upon discovering that they have been encircled. The guerrillas can be expected to probe for gaps and to attack weak points to force a gap. Units organizing the line of encirclement push strong patrols out of their front to reconnoiter and give timely warning

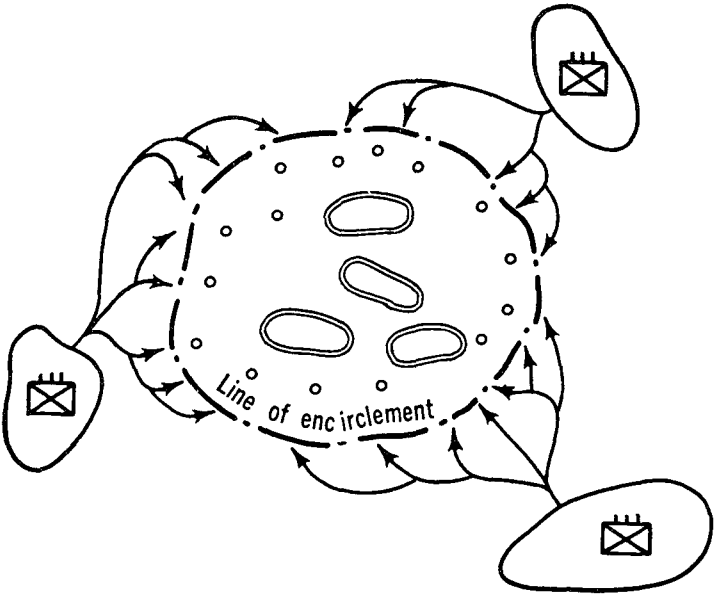


Figure 35. Simultaneous movement to the line of encirclement.

of the approach of guerrilla formations. Air reconnaissance supplements ground reconnaissance. Support and reserve units are located in depth to cover likely guerrilla escape routes. Escape routes deliberately established as ambushes or kill-zones may be effective. Reserve forces are committed if guerrilla forces succeed in breaking through the line of encirclement.

(2) *Offensive drive.* The encircled area is narrowed by all forces advancing simultaneously from the line of encirclement to successive designated lines in the center. This method can be used when the area of encirclement is small and the guerrilla forces are comparatively weak. When vast areas are involved or the hostile forces are strong, encircling forces hold their position while other forces drive spearheads into the area and cut it into smaller parts which are then cleared of guerrillas. Units driving spearheads into the circle must be particularly vigilant against ambush. Once the encirclement is firmly established, the destruction of the guerrilla forces is conducted methodically, thoroughly, and without haste. The units that advance from the initial line of encirclement are impressed with the necessity of thoroughly combing every possible hiding place for guerrilla personnel and equipment. Successive echelons are used to comb the

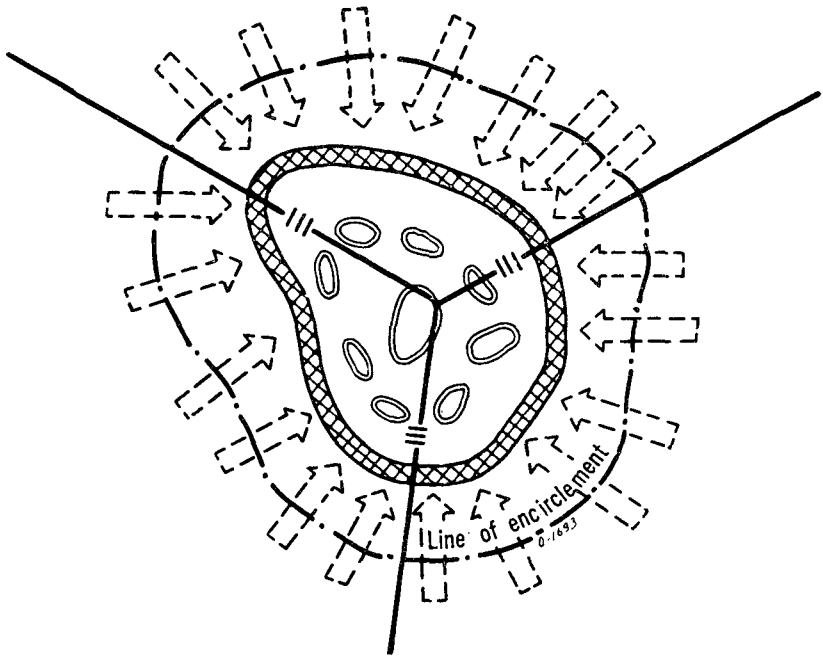


Figure 36. Destruction of guerrillas by offensive drive.

terrain again. Areas that appear totally inaccessible such as swamps or marshes must be penetrated by utilizing special equipment or improvised means. Guerrilla ruses discovered during the course of operations are reported promptly to all interested units and agencies. All indigenous personnel including children found in the area are held in custody. They are released only after identification and on orders from proper authority.

c. Attack. Lack of time, inadequate forces, or the nature of the terrain may prevent encirclement operations. Surprise attacks followed by aggressive pursuit may prove successful in these cases. The position and strength of the guerrilla forces are ascertained before launching the operation. Reconnaissance is disguised so that the guerrillas will not be alerted. The operation is conducted to achieve maximum surprise and the destruction of the guerrilla forces. Opportunities for completely surprising a guerrilla installation or unit by ground attack even with forces as small as a company are rare. Surprise can be achieved by the use of helicopters or native guides. Indigenous personnel, who are thoroughly familiar with the terrain and guerrilla dispositions, may be induced to guide the attacking forces over concealed routes that bypass guerrilla outposts. In order to bring maximum firepower against the guerrillas as soon after contact as possible,

distances between elements are kept at a minimum and automatic weapons are kept well forward.

d. Pursuit and Mopping Up.

(1) Task forces are organized and held in readiness to pursue guerrillas who succeed in withdrawing or who are dispersed during the course of the main operation. To match the mobility of small guerrilla groups, the pursuit task forces should be specially equipped and supplied. Airmobile units and tactical air support are used when the situation permits. During relatively small-scale operations, the situation will often change rapidly. Adequate forces are held in reserve to assist units threatened by superior guerrilla forces. Their effectiveness depends on mobility and adequate communications.

(2) After a successful attack on a guerrilla-held area, the area is not relinquished immediately but is combed for concealed guerrilla personnel and equipment. Documents and records are collected for intelligence analysis. Traps and ambushes are established among trails in the area, and are manned both day and night. These will catch many guerrillas who escaped the main attack and are confused about the situation. The period after guerrilla forces have been badly mauled and broken up into small groups is an excellent time for employing loudspeaker and leaflet messages calling upon them to give up the helpless struggle and surrender.

313. Control of Occupied Hostile Areas

a. During the conduct of antiguerrilla operations, the division must establish and maintain rigid control measures designed to isolate the civilian population from the guerrilla forces. The extent of the control depends upon the situation in area and the authority which has been delegated to the division commander.

b. Public attitudes must be determined and evaluated. Control and restrictions are relaxed in direct proportion to the cooperation received. The sincere desire of the civilians to oppose guerrilla coercion should be supported.

c. The division is assisted in the maintenance of control over the civil populace by attached civil affairs units and teams. FM 41–5 discusses control measures which can be used.

CHAPTER 11
TROOP MOVEMENTS

Section I. BASIC CONSIDERATIONS

314. General

The primary consideration in troop movements is to insure that troops arrive at the proper place, at the proper time, in effective condition, and in the best formation to accomplish their assigned mission. In nuclear warfare particularly, commanders must move their troops from dispersed positions to the critical point of decision and deploy them without forming a remunerative target for the enemy's nuclear delivery means.

315. Classification of Movements

Troop movements are classified as tactical or administrative. They can be further classified as to transportation means employed.

a. Tactical. A tactical move is one conducted with primary emphasis on movement in combat-ready formations. Tactical moves are based upon the assumption of early ground contact with the enemy, either en route or shortly after arrival at destinations. Under these conditions, the most efficient use of transportation facilities is frequently sacrificed to tactical considerations.

b. Administrative. An administrative move is one conducted with primary emphasis upon most efficient use of available transportation. Such moves ordinarily are based upon the assumption that contact with the enemy is remote, both en route and shortly after arrival at destination.

316. Plans

Carefully prepared and detailed plans are necessary to efficient troop movements. Units must be given timely notification of impending movements in order to permit proper preparation. Factors which must be thoroughly considered and evaluated include—

a. Organization of troops and equipment to meet the requirements of the tactical situation while best utilizing available transportation.

b. Assembly of troops and transportation.

c. Packing and marking of equipment and loading of personnel and equipment.

d. Provision for control and administrative support en route and at destination.

e. Reassembly of personnel and equipment in the desired formation at destination.

f. Provision for adequate security en route and at destination.

g. Influence of climate, seasons, weather, and adequacy of the transportation net.

317. Control

a. Troop movements are best accomplished through centralized control. Control requires—

(1) Proper organization of the force for movement.

(2) Provision of agencies to plan and supervise the movement.

(3) Announcement of control measures such as routes or phase lines.

(4) Communications to provide information concerning, and facilitate command of, the movement.

b. Proper organization for movement requires that the force be organized into manageable movement echelons. Unit integrity is preserved as much as possible. When movement groups are composed of troops from more than one unit, a single commander is designated. Subgroupings should consist of units under their own commanders.

318. Utilization of Means

Within the limits prescribed by military necessity, troop movements must fully utilize transportation means. This fundamental is paramount in administrative moves. It must always receive consideration in tactical moves.

319. Security

Security and security planning are essential to troop movement in order to avoid surprise, attack, and compromise of plans.

320. Training and Standing Operating Procedures

To provide for expeditious movement, individuals and units train for all types of movement. Unit standing operating procedures include methods and techniques for using each mode of transport which the unit may be expected to employ.

Section II. TACTICAL MOTOR MARCHES

321. General

a. The movement of an infantry division requires detailed planinng. The time available for the issuance of orders is normally short, yet they must be disseminated throughout the division, with parts of them even to individual drivers. Time is saved by practice and experience and by including all possible details in the division standing operating procedure.

b. The division transportation officer advises the division commander and staff on matters relating to the employment, capabilities, and limitations of organic and attached administrative support transportation. He is concerned with both tactical and administrative movements. He supervises operational control of the division traffic headquarters which is normally located within the division logistics command center. The functions of the division transportation officer are contained in FM 101–5.

c. The division provost marshal advises the division commander and staff on matters relating to the condition, capabilities, and limitations of the road net. He is concerned with both tactical and administrative movements. He has operational control of the division military police in directing and controlling movement on the road. The functions of the division provost marshal are described in FM 101–5.

d. Details of planning and executing marches are contained in FM 25–10 and FM 101–10.

322. Preparation for the March

Preparation for the march requires that the following steps be accomplished. Many of the steps should be included in the division standing operating procedure.

a. Issue a warning order.

b. Make a map reconnaissance. Ground and air reconnaissance of the routes and the new area are made when possible.

c. Select and clear routes (if not specified by higher headquarters).

d. Designate the initial point (IP) and release point (RP).

e. Reconnoiter the route to the IP.

f. Establish necessary liaison.

g. Provide for maintenance, supply, evacuation, and refueling.

h. Determine the order of march, rate of march, maximum speed of vehicles, distance or density, phase lines and control or check points (if used), and halts.

i. Provide for air, ground, and communication security.

j. Issue the operation orders.

k. Issue strip maps when practicable.

l. Dispatch advance parties, such as quartering and reconnaissance parties.

m. Provide for traffic control.

n. Determine communication channels to be used for control and any restrictions on their use.

o. Security.

323. Warning Order for the March

The warning order alerts units for the impending move. It is issued as soon as the first information concerning the move is received. Additional information of importance is disseminated as it is received. If the information is available, the warning order includes the destination, time and date of departure, purpose of the move, and other essential information. Subordinate commanders are given as much time and information as soon as possible to make preparations, plans, and reconnaissance. The warning order normally is issued as a fragmentary order and may be issued either in writing or orally.

324. Reconnaissance of Routes

a. The assignment of routes to subordinate units depends upon the mission of the unit, enemy capabilities, and the nature of the route. Consequently, all routes under consideration by the division should be reconnoitered and properly controlled. Speed for movement is closely related to the accuracy of reconnaissance.

b. The cavalry squadron, aviation company, military police detachment, and engineer battalion conduct route reconnaissance in conjunction with other functions. When a special need for route reconnaissance arises, these units, as appropriate, provide the specific assistance required. The capacities of underpasses, bridges and culverts, ferries, fords, and routes are predetermined by reconnaissance; units with loads exceeding these capacities are rerouted. Reconnaissance also determines critical defiles and obstacles in order that congestion can be prevented and local security can be provided. Organic photographic facilities for the division enhance its route reconnaissance capability.

325. Selection of Routes

a. The selection of routes is an important factor in successful marches, especially when the march is to be extremely long or is to be made during darkness or adverse weather.

b. To reduce vulnerability to nuclear fires, the division uses multiple routes including cross-country routes. This allows moves to be completed more rapidly, and provides dispersion, flexibility, and mutual flank protections.

c. When moving on multiple routes, elements of the division often use secondary roads. Provision is made for engineer support if required. Care is exercised to assign routes suitable to the various division loads.

d. The overriding consideration in the selection of routes for a tactical march is the mission. The routes that best serve the mission are the ones selected. Military police are provided for control purposes during the move. Provision is made for the necessary engineer support to clear obstacles created by nuclear fires if breaching these obstacles exceeds the pioneer capabilities of the tactical unit.

e. When selecting a route, a commander insures that all type vehicles in his column can negotiate the route. It may be necessary to march certain vehicles over separate routes.

f. Normally the best available routes are selected for administrative marches even if the distance is greater. Hard-surfaced roads with adequate bridge capacities eliminate many of the difficulties encountered on dusty or muddy roads and bridge bypasses.

326. Division Planning Considerations

a. The following calculations are involved in determining the time required to complete the move of the division:

(1) *Preparation time,* which is the time from receipt of the order to move until the first vehicle crosses the IP. FM 101–10 contains experience factors.

(2) *Time distance,* which is the time required to travel between two given points (usually from the IP to the RP).

(3) *Time length,* which is the length of time required for the column to pass any given point.

b. Determination of the time that the division can begin execution of its assigned mission involves the time required to accomplish necessary tasks at the end of the march. These tasks include final reconnaissance, refueling, and movement to the line of departure. Final preparation times are added only to the calculated time for moving the attacking units to the area of commitment. Reserve elements are not considered in these calculations. The G3 plans backward from the scheduled time of attack to determine the time that the division can commence a continuous movement to the line of departure.

c. Tables, graphs, and other aids based upon the division's ex-

perience greatly simplify movement calculations. The most important of these aids are—

(1) Table of precalculated road spaces and time lengths for division units.
(2) Table of simplified formulas for road spaces and time lengths.
(3) Table of time distances.
(4) Table of average time factors.
(5) Road movement graphs.
(6) Road movement tables.
(7) March calculators.

d. The vehicle availability status of divisional units changes frequently. Likewise, the organization for combat varies with the tactical situation and the mission. Consequently, commanders and staff officers must know the current status of vehicles. Each headquarters should frequently ascertain the status of vehicles of the next lower command echelon and determine the current time length and road space of each unit.

327. Designation of the Initial Point

a. The purpose of a division IP is to provide all units of a march column a common point from which to start their movement. When more than one route is being used, a division IP is designated for each route. The IP must be a place along the route of march which is easily recognizable on both map and ground and readily accessible, such as a road intersection. It should not be located in defiles, on hills, or at sharp curves in the road. A division IP should be sufficiently distant from the battle group assembly areas to allow the march serials to be organized and moving at the prescribed rate when they reach it. It should not be located to cause any element of a column to march to the rear or to march through another unit to reach it.

b. Prior to starting a march, each major unit of a serial reconnoiters its route from the serial IP to the division IP and determines the exact time required to move this distance. Normally, the time that each serial will arrive at the division IP is specified by the division G3 and published in the operation order. However, the serial commander must calculate and announce the times for major units of his serial to arrive at and clear a designated serial IP.

328. Designation of the Release Point

The RP should be easily recognizable on both map and ground and must be on the route of march. Unit guides meet their units

as they arrive at the RP and lead them to the new areas. Multiple routes and cross country movement should be employed from the RP to enable units to disperse rapidly. The division RP should not be located in defiles, on hills, or at sharp curves in the roads.

329. Road Movement Graph

A road movement graph is a time-space diagram used in planning and controlling marches and in preparing or checking road movement tables. It is a simple method of obtaining information to prepare a road movement table. It shows the locations at all times of the head and tail of each march serial. See FM 101–10 for details and an illustrative example of a road movement graph.

330. Road Movement Table

a. A road movement table is normally published as an annex to the operation order. The road movement table contains information and instructions concerning the march serials involved in the movement, including their serial numbers, rates of march, routes, IP, times of crossing the IP, critical points, times of arrival at and departure from critical points, and other pertinent details. This information is usually obtained from an accurate knowledge of the status of routes and units and from a road movement graph. Some of the information contained in the road movement table may be obtained from time and space calculations.

b. It is generally infeasible for a marching column to maintain a constant density and a uniform time interval between march units and march serials, while at the same time maintaining a set rate of march. Such factors as road space, rate of march, time interval, elapsed time, time lengths, and distance will vary somewhat from the calculated data even in well-disciplined and well-controlled marches. In formulating the road movement table, it is important to consider the state of training of units, weather, light and road conditions, and the tactical situation, and to add a safety time factor to calculations if necessary.

c. Loss of time and the creation of obstacles and radiological contamination caused by nuclear attack must be expected and alternate plans must be prepared for immediate execution. The margin of time required for moves will depend on the weather, terrain, experience factors, road conditions, and the enemy's nuclear capability.

331. Organization of the Column

a. Whenever possible, elements should move in multiple columns,

each organized to permit continuous movement. The following should be considered in planning the formation of the march elements and the order of march:

(1) Mission of the units upon arrival and the disposition which will best accomplish those missions.
(2) Present disposition of units.
(3) Routes available.
(4) Nature and extent of probable interference.
(5) Difference in rates of march of various elements.
(6) Degree of separation of units on the move.
(7) Degree of probability that the enemy will employ nuclear weapons.
(8) Implications of movement conducted during hours of darkness or under conditions of limited visibility.
(9) Degree of flexibility and relative invulnerability of column formation.
(10) Degree of tactical control.

b. The division may march in up to 7 major march serials: 5 battle groups, division troops, and division trains. However, there is no standard formation; march serials are organized as required by the tactical situation; in particular, elements of division artillery, other division troops, and the division trains can move with the battle groups.

c. The division executing a march is organized into march units and march serials or march columns (FM 25–10).

d. For information concerning vehicle densities of motor columns, see FM 101–10.

332. Rate of March

a. The introduction of nuclear weapons has increased the requirement for speed and precision of movement. Rates of march will vary with the local conditions. Mixed vehicles in column, wheeled and tracked, must travel at the optimum rates of the slowest vehicles.

b. Factors that determine the exact rate of march are—

(1) Grades, sharp turns, cities, towns, and other restrictions along the route.
(2) Surface conditions such as dust, ice, mud, and snow.
(3) Condition of drivers and crews to include training and experience.
(4) Condition of vehicles.
(5) Weather conditions that affect visibility.
(6) Light conditions.

333. Halts on the March

a. See FM 25–10 for details of time, duration, and frequency.

b. A series of assembly areas is selected along all routes for dispersal of units during planned halts. Units move into these areas for refueling and relief halts and to clear blocked or contaminated roads when ordered to do so. Movement into and out of assembly areas is rigidly controlled by unit commanders. These areas are sited where hardstand and cover are afforded. They should be easily accessible to the routes of movement. They should be large enough to permit reasonable dispersion of a battle group-size unit. Camouflage discipline in such areas is very important.

334. Refueling on the March

March unit commanders made plans for refueling en route. Halts for refueling take place in selected assembly areas if possible. Sufficient class III supplies are carried in unit trains, obtained from army supply points en route, or dispatched ahead of the movement to be on hand as required.

335. March Liaison

a. Each march unit and serial establishes liaison with the preceding element in the column before crossing the IP. The liaison agent keeps his commander informed of the state of readiness of the preceding unit, delays that occur, and the time of departure of the preceding unit. Unless radio or listening silence is imposed, liaison is normally effected by radio. When radio silence is imposed, wire and messengers (motor or helicopter) are employed. This type liaison minimizes last-minute changes in march orders and enables each march unit to start at the proper time and not slow up the movement of the main body. It also eliminates the premature removal of camouflage materials, unnecessary consumption of fuel, and fatigue to personnel.

b. Division headquarters establishes liaison with higher headquarters to keep abreast of priorities on roads and at critical points on the route of march. If there is a possibility of other units using or crossing the routes designated for movement of the division, liaison is established with these units at the earliest time possible.

336. Logistical Support

a. Through timely coordination and planning, logistical support units provide for emergency repair and resupply on the move and after arrival at the destination.

b. To prevent hindrance to tactical mobility, the division trains move independently, when practicable, and generally on one or more interior routes. They may march to the location in a single move or may displace by echelon.

c. For details of maintenance and procedures in event of accident, see FM 25–10.

337. Night Marches

Enemy air and nuclear capabilities and the requirement for secrecy frequently dictate movement at night or under conditions of poor visibility. In general, night marches are organized and conducted in the same manner as day marches; however, reduced visibility places greater emphasis on control, liaison, and maintenance of direction. These aspects require careful prior reconnaissance, preparation, and suitable control measures.

338. Security

a. General.

(1) The division commander prescribes the security measures for the division as a whole.

(2) The cavalry squadron and the aviation company assist in providing security for the division. During a move involving the major portion of the division, these units are used actively under division control.

b. Security During Movement to Contact.

(1) *Security forces.* A division moving to contact uses covering forces, advance guards, flank guards, and march outposts to secure itself against ground attack.

(*a*) The division advancing to contact normally is preceded by a covering force. The covering force can be directly under the control of the division commander or it can be provided by higher headquarters and retained under the control of that commander. Operations of the covering force are discussed in section IV, chapter 6.

(*b*) Each commander of a column, even though preceded by a covering force, also sends forward an advance guard to protect the main body from surprise and to insure its uninterrupted march.

(*c*) Flank and rear guards, operating directly under the column commander, secure the main body by operating to its unsecured flanks and rear.

(2) *Security at halts.* When a column halts for a short period, its advance, flank, and rear guard establish march out-

posts. If the command is required to halt for a long period, it secures itself by means of an interior guard for internal security and an outpost system disposed to cover its front, flanks, and rear. Each column can organize its own outpost system. In either case the outpost system is organized from rear to front into reserve, supports, outguards, and sentinels. When important points outside the outpost system are to be secured, detached posts are established. The main body is disposed to counter enemy threats and facilitate the adoption of a predetermined defense.

339. Orders

a. The operation order contains the instructions issued for the movement of units from one location to another within a stated period of time. It is prepared by the staff in accordance with decisions of the commander. These decisions are normally reached after the completion of the necessary reconnaissance and an estimate of the situation. On occasions, the time available and the existing tactical conditions will not permit detailed planning or reconnaissance. Consequently, it is advisable for a division to have several march plans prepared in the form of a standing operating procedure. These plans can then be modified to fit the given situation by fragmentary orders.

b. Conditions and time permitting, information in the operation order includes destination, routes, rate of march, maximum speeds, order of march, IP, time of crossing the IP, details of air and ground alert guards, scheduled halts, distances, RP, communications location of the commander during the march, and strip maps. Additional details, such as route or unit markers to be used, control or check points, and location of road guides, may be included if necessary. Certain items listed above often are standardized and included in the unit standing operating procedure. Items so included are not repeated in the operation order.

340. Strip Maps

A strip map is a schematic sketch containing useful information of the route of march. A strip map should be included as an annex to the operation order. It is particularly useful to commanders of small units for organizational control. Strip maps should be reproduced in quantity by the using units and supplied to key personnel, particularly to vehicle commanders, drivers, and route markers.

341. Control

a. The division commander established initial control of the march by designating in the order—

(1) The initial and other critical points.
(2) The time at which the heads or the tails of columns pass these points.
(3) The rate of march.
(4) Time interval between units.
(5) The order of march.
(6) The routes of march.
(7) The assembly areas.
(8) Phase lines and march objective if appropriate.
(9) The location(s) of his command post.
(10) Communications to be used for control of the march.

b. The rapid movement of forces requires flexibility, responsiveness, and effective control. Great emphasis must be placed on the movement control of divisional units and of corps and army units operating in the division zone. A movement plan or an SOP should provide for—

(1) Establishment of unit priorities and control of the movement to and on routes. Routes must be clearly marked and vehicle operators thoroughly briefed.
(2) Communications of march elements and control posts. Radio communication is normal; however, radio silence may be required. In such instances a desirable alternate communications means is aerial messenger.
(3) The granting of a clearance by the appropriate traffic headquarters prior to movement.
(4) A surveillance system to check unit locations and march dispersion and to assist in controlling the march.

c. March discipline and strict adherence to march techniques are necessary to the maintenance of uninterrupted movement and reduction of the vulnerability of the division. An efficient method of detecting and correcting violations is aerial surveillance. Consistent with tactical security this system is used to the maximum. March serials and march units identify themselves to aerial observers by displaying panels. Ground surveillance should be used for all marches. Staff officers at all echelons should be used to check and control columns.

d. Efficient use of military police must be planned. Movement on multiple routes during periods of poor visibility and the existence of major intersections, defiles, and detours along routes increase traffic control problems. Minimum essential traffic control

posts should be used. In conjunction with control posts and consistent with tactical security requirements, aerial and mobile ground control teams can be used with each column. The aerial control team can land and control situations until relieved by a ground control team. Additional military police support from higher headquarters should be obtained for special operations requiring close movement control procedures.

342. Control During Movement To Contact

a. For control purposes a large unit normally is assigned either objectives (to include intermediate objectives and phase lines), a zone, an axis of advance, or routes of movement. The commander also prescribes the time and place of departure of his column so as to produce the desired formation. Column commanders report promptly when objectives, phase lines, or check points are reached or at other designated times. The imminence of contact with strong forces and the terrain largely determine the degree of control established.

b. In an advance, commanders are well forward in order to control the operation. The command post moves either by bounds or at a designated place in a column. When contact is imminent, the commander places increased emphasis on possession of terrain suitable for subsequent development of his command. Once a march has begun, variations in disposition or formation are accomplished by halting columns, changing the routes, or by modifying existing or prescribing new control measures discussed in *a* above.

c. Signal communication during tactical marches is prescribed by standing operating procedure, supplemented, as necessary, by special instructions. The principal means employed are messenger and radio. Army aviation may be used to maintain contact between columns and to report their arrival at successive march objectives.

Section III. MOVEMENTS BY RAIL

343. General

Rail is an economical form of land transportation for moving large bodies of troops long distances. When gasoline and motor vehicle tires are critical items, rail movement should be used to the maximum extent possible. When rail facilities are limited, tracked vehicles should be moved by rail and all others by road.

344. Responsibilities

Troop movements by rail are the joint responsibility of the transportation agency and the unit being moved.

a. The transportation agency is responsible for the establishment of facilities for the accommodation of the moving unit. It furnishes administrative support, provides security during movement except when this responsibility is charged to other headquarters, and renders necessary technical guidance and supervision.

b. The moving unit is responsible for its own internal administration and control. It prepares and implements loading plans in accordance with directives and in cooperation with the transportation agency. The moving unit also provides housekeeping and local security details of troops to the transportation agency.

345. Plans and Orders

a. When directing the movement of a unit by rail, the order will designate the points at which the unit will entrain and will indicate the desired closing time at the unit's destination.

b. The commander of the troops is responsible for the preparation of plans and tables regulating loading. Details of the move are worked out with the transportation officer of the area in which the move originates. A central movement control agency determines the routing. All contacts by the moving unit with civilian or foreign government railroads are made through the transportation officer.

346. Organization for Movement

a. The sequence in which elements are moved is determined by the availability of transportation, the mission, and the situation which will confront the moving unit at destination. The assignment of units to entraining points is determined by availability of suitable loading facilities, materiel to be loaded, and proximity of elements to entraining points.

b. A transportation grouping consists of the troops, equipment, and supplies transported on one train. Transportation groupings are organized in a manner to effect the most economical loading unless tactical considerations dictate the maintenance of tactical unity. When tactical considerations govern, each tactical element should be accompanied by its own equipment and supplies.

Section IV. MOVEMENTS BY WATER

347. General

a. Water transport is the primary means by which oversea operations are established and maintained. It is characterized by large capacity for personnel and tonnage, great range, and comparatively slow speed.

b. Waterborne movements are especially vulnerable to attack by hostile air, surface, and undersea forces. When there is a possibility of enemy attack, vessels usually will be assembled in a convoy under Naval command and provided with a Naval escort. Convoys also may be provided with air cover.

348. Responsibilities

a. The responsibilities of the moving agency, the Military Sea Transport Services (MSTS) or the US Navy, are set forth in FM 110–5 and applicable joint publications. For details relative to water transport, see FM 101–10.

b. The responsibilities of the unit being moved are the same as set forth in paragraph 344*b*.

349. Inland Waterways

a. Use. Tactical movement by water is appropriate in situations in which inland or coastal waterways provide the most feasible or supplementary axes of advance and/or lines of communications. The division has its organic aircraft and armored carriers which are used to the maximum. Additional support may include the landing vehicles of the engineer amphibious support command, Army aircraft, landing craft and amphibious trucks of transportation units, Naval landing craft, or any combination of these. See FM 101–10 for capabilities of water transportation means.

b. Planning. Planning for use of inland waterways must begin well in advance of arrival at the obstacle to insure maintaining mobility during the crossing operation. Standing operating procedures must be used, and detailed loading plans must be prepared for the use of aircraft, amphibious vehicles, and other lift. Emphasis must be placed on the proper allocation and control of all water lift.

350. Amphibious Operations

a. Planning for amphibious operations is conducted in sequence "backward" from the seizure of the objective of the landing force. The division is thus formed into tactical groupings correspond-

ing to the carrying capacity of the available transportation and loaded in the reverse sequence of their employment. Groupings are based on tactical missions and are landed in the order of their planned participation in the operation. Consideration must be given to the inclusion of adequate service units in each tactical grouping.

b. Troops with equipment and supplies for the assault are combat loaded and are distributed throughout the transports of the convoy in accordance with the contemplated operations upon landing. It is essential that assault troops, their combat equipment, and initial supplies, be loaded in the same ship in a manner that will insure rapid debarkation in the desired priority so the unit can effectively perform its assigned mission on landing.

c. Subsequent to the initial landing on a hostile shore, troops, equipment, and supplies for support of the operation and buildup of the bases may be administratively loaded depending on the situation. In certain cases, such as reinforcing an established base, troops, equipment, and supplies may be shipped in separate convoys to gain maximum use of available shipping.

d. Detailed information of amphibious operations is contained in the 31 series field manuals.

Section V. MOVEMENTS BY AIR

351. General

Air movement is a means of transportation used to launch units rapidly into battle, or deliver troops, supplies, or equipment to a secured objective area or into an area inaccessible to other means of transport. Movements by air may be either tactical or administrative, or a combination of administrative and tactical, depending upon the contemplated employment of the force being moved. Movement by air capitalizes on the capability of the aircraft to overcome distances and geographical barriers and is characterized by speed and flexibility. It is limited in its employment by adverse weather, inadequate air-landing facilities, and enemy counterair activities. The transport of bulky or heavy items of equipment is restricted by the conformation and allowable cargo load of available aircraft.

a. Strategic. Strategic mobility is optimized by air movement. By the use of aircraft, the division, less medium tanks, tank recovery vehicles, and armor launched bridging, is air-transportable and can be moved to locations throughout the world in a short time, thereby capitalizing on strategic surprise. The division can be moved by air independently or as part of a larger airborne

force. See TM 57–210 and FM 57–30 for information regarding air movement.

b. Tactical.

(1) *Army aviation.* The organization and equipment of the infantry division facilitate the use of Army transport aviation to enhance its battlefield mobility. Such use of aircraft must be considered a normal operation. See chapter 9 and FM 57–35 for detailed information on airmobile operations.

(2) *Air Force.* Air Force troop carrier units can be used to achieve tactical mobility. This use includes, but is not limited to—

(*a*) Transport for the division or elements thereof as part of an airborne force.

(*b*) Supply and evacuation.

352. Availability of Army Aviation

Aircraft within the division are assigned to the aviation company. Mobility of the division is improved by the company's support of the reconnaissance effort and its use to move troops and supplies and to evacuate casualties. The company can lift simultaneously approximately two platoons of infantry utilizing organic utility and light transport helicopters. Since the division's troop lift, supply and evacuation capabilities are limited, careful coordination and planning are essential to insure their most efficient use. In this coordination and planning, consideration should be given to the additional Army transport aviation support which is available within the field army, and its use should be fully exploited. Plans for employing units using Army transport aviation can encompass operations up to and including the tactical airlift of entire battle groups less elements of the reconnaissance platoon.

353. Control of Army Aviation

Army transport aviation units from higher headquarters may be attached or placed in support of the division. Normally, the division will retain operational control of such units; however, circumstances may require that control be passed to a lower level. Delegation of operational control may be favored when—

a. A subordinate unit is better able to plan, coordinate, and control the overall operation.

b. The planned operations do not transcend the area of responsibility of the unit conducting the operation.

c. The unit conducting the operation has been assigned the responsibility for selecting the objectives of the airmobile force.

d. The unit conducting the operation has adequate communication facilities for control of Army transport aviation.

354. Air Force Troop Carrier Support

Plans for operations employing troop carrier aircraft include maintaining up-to-date requirements to move the division or its subordinate elements by various types of aircraft. Aircraft requirements for the division to move by Air Force aircraft are indicated in appendix V. These tables should be used as a guide in determining specific requirements. The initial echelon may be increased or decreased depending upon the tactical requirement for the operation. When aircraft are not available in the quantities required, elements which have a relatively less important operational role are phased back to subsequent echelons. See TM 57–210 for technical information regarding air movement.

Section VI. BIVOUAC AND ASSEMBLY AREAS

355. General

a. The infantry division normally occupies a bivouac area only in areas where the possibility of contact with the enemy is remote. Disposition of the units within the bivouac area is influenced by the need for adequate dispersion to minimize the effects of an air or nuclear attack and for protection against guerrilla attack. Units are normally grouped under the control of their own headquarters. Adequate security measures are always required for protection of any bivouac area.

b. An assembly area for an infantry division is an area in which its organic units assemble to organize and prepare for further action. Unit dispositions are normally influenced by the tactical situation, and contact with the enemy is either probable or imminent. The assembly areas are classified in terms of the size of units occupying them (battle group assembly area). Security measures are taken in assembly areas as required by tactical situation.

c. The following functions are normally performed while units are in an assembly area:

(1) Issuance of orders.
(2) Reorganization for combat.
(3) Refueling and resuppply operations.
(4) Maintenance and decontamination operations.

(5) Rest and relaxation of personnel to the maximum extent possible.

d. The following are desirable characteristics of an assembly area:

(1) Adequate space.
(2) Desirable shape.
(3) Cover and concealment.
(4) Adequate road net.
(5) Location that facilitates future employment of the force.
(6) Noninterference with other activities in the vicinity.
(7) Hardstanding for vehicles.
(8) Irregular terrain to provide protection from nuclear attack.
(9) Protection from ground attack in the form of natural and artificial obstacles.

356. Selection of Bivouac and Assembly Areas

a. Bivouac Areas. The selection of bivouac areas depends more on the availability of suitable space than on any other consideration. The area must be sufficiently large to permit adequate dispersion of subordinate units but not to interfere with local activities. The bivouac area should be located to favor administrative support of the division. The transportation net within the area must be considered and should be adequate to support division traffic. Dispersion of unit areas should be consistent with the factors of control and minimizing effects of nuclear, air, and ground attack.

b. Assembly Areas. The assembly area of an infantry division is normally located either in the army service area or in the corps rear area. This area is actually a general area within which are located the assembly areas of the major elements of the division. These subordinate command assembly areas are specified by the division commander. Unit integrity is maintained in the assignment of the subordinate unit assembly areas.

c. Requirements. The threat of nuclear weapons demands that the size of a division assembly area encompass hundreds of square miles. The factors to be considered in the selection of an area are—

(1) Mission.
(2) Plan of operations.
(3) Enemy situation and capabilities, including nuclear, guerrilla, and air. Of particular consideration is the enemy's nuclear capability and pattern of use.

(4) Situation of adjacent friendly forces.
(5) Routes of communication and movement.
(6) Weather and terrain.
(7) Civil affairs situation.

d. Shape. The shape of the assembly area must be considered. To achieve protection from the effects of nuclear weapons, assembly areas may be linear, frequently along routes of advance, or circular or rectangular with a hollow center.

357. Occupation of Bivouac and Assembly Areas

a. An advance party or quartering party normally precedes the main body of the division into the bivouac or assembly area. Air defense, if required, is requested and furnished the advance party. The advance party improves entrances into and routes within the area and prepares the area for occupancy prior to the arrival of the division. Allocation of subareas and the posting of signs and guides are made to facilitate moving the march units into the area without halting. Administrative considerations apply primarily in the occupation of a bivouac area. Tactical considerations are given priority in the occupation of an assembly area.

b. The size of the assembly area is calculated in accordance with the enemy's capability and pattern of use of nuclear weapons to include delivery means and yields. Sufficient distance is provided between units so that no more than one element can be lost to one nuclear weapon of a yield consistent with the enemy's known or assumed capability. Consideration is given to positioning units such as the armor battalion in battle group areas so that the entire armor battalion would not be lost to one nuclear weapon. The actual size of any area as dictated by nuclear vulnerability should be consistent with the factors of control, availability of space, and defensibility from ground attack. Maximum use is made of tactical cover and deception to lessen the enemy's chance of target acquisition.

APPENDIX I

REFERENCES

FM 1–5	Army Aviation Organizations and Employment.
FM 1–100	Army Aviation
FM 3–5	Tactics and Techniques of Chemical, Biological, and Radiological (CBR) Warfare.
FM 5–132	Infantry Division Engineers
FM 6–20	Field Artillery Tactics and Technique
FM 7–10	Rifle Company, Infantry and Airborne Division Battle Groups.
FM 7–19	Combat Support Company, Infantry Division Battle Group.
FM 7–21	Headquarters and Headquarters Company, Infantry Division Battle Group.
FM 7–24	Communication in Infantry and Airborne Divisions.
FM 7–40	Infantry and Airborne Division Battle Groups.
FM 10–7	Quartermaster Organization and Operations in Divisions.
FM 10–63	Handling of Deceased Personnel in Theaters of Operations.
FM 11–10	The Signal Battalion, Infantry Division
FM 17–33	Tank Units, Platoon, Company and Battalion.
FM 17–35	Armored Cavalry Platoon, Troops and Squadron.
FM 17–50	Armor Logistics
FM 19–10	Military Police Operations
FM 19–20	Criminal Investigation
FM 19–15	Civil Disturbances and Disasters
FM 19–25	Military Police Traffic Control
FM 19–40	Handling Prisoners of War
FM 19–90	The Provost Marshal
FM 21–5	Military Training
FM 21–6	Techniques of Military Instruction
FM 21–18	Foot Marches
FM 21–30	Military Symbols

FM 21–40	Small Unit Procedures for Nuclear, Biological, and Chemical Warfare.
FM 25–10	Motor Transportation Operations
FM 26–5	Interior Guard
FM 27–10	The Law of Land Warfare
FM 30–5	Combat Intelligence
FM 30–7	Combat Intelligence, Battle Group, Combat Command, and Smaller Units.
FM 30–9	Battalion, Field Army
FM 30–16	Technical Intelligence (U)
FM 31–15	Operations Against Airborne Attack, Guerrilla Action and Infiltration.
FM 31–21 and FM 31–21A	Guerrilla Warfare and Special Forces Operations.
FM 31–25	Desert Operations
FM 31–40	Tactical Cover and Deception (U)
FM 31–50	Combat in Fortified Areas and Towns
FM 31–60	River Crossing Operations
FM 31–70	Basic Cold Weather Manual
FM 31–71	Northern Operations
FM 31–72	Mountain Operations
FM 32–5	Communications Security (U)
FM 33–5	Psychological Warfare Operations
FM 41–5	Joint Manual of Civil Affairs/Military Government.
FM 41–10	Civil Affairs and Military Government Operations.
FM 41–15	Civil Affairs and Military Government Units.
FM 55–37	Transportation Battalion, Infantry Division
FM 57–30	Airborne Operations
FM 57–35	Airmobile Operations
FM 57–100	The Airborne Division
FM 72–20	Jungle Operations
FM 100–1	Field Service Regulations-Doctrinal Guidance (U).
FM 100–5	Field Service Regulations-Operations
FM 100–10	Field Service Regulations—Administration
FM 101–1	The G1 Manual
FM 101–5	Staff Officer's Field Manual-Staff Organization and Procedures.
FM 101–10	Staff Officer's Field Manual-Organization, Technical, and Logistical Data.
FM 101–31	Nuclear Weapons Employment (U)

TC 101–1	Prediction of Fallout and Radiological Monitoring and Survey.
TC 3–7	Capabilities and Employment of Biological Agents.
TM 3–200	Capabilities and Employment of Toxic Chemicals.
TM 57–210, 210A	Air Movement of Troops and Equipment
AR 220–10	Preparation for Oversea Movement of Units (POM).
AR 320–5	Military Terms, Abberviations, and Symbols, Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations and Brevity Codes.
DA Pam 108–1	Index of Army Motion Pictures, Filmstrips, Slides, and Phono-Recordings.
DA Pam 310-series	Military Publications Indexes

APPENDIX II
ORGANIZATION CHARTS

1. General

This appendix contains organization charts for each company, battery troop and higher level unit in the infantry division. The organizations depicted are based upon the D-series tables of organization and equipment.

2. Infantry Division

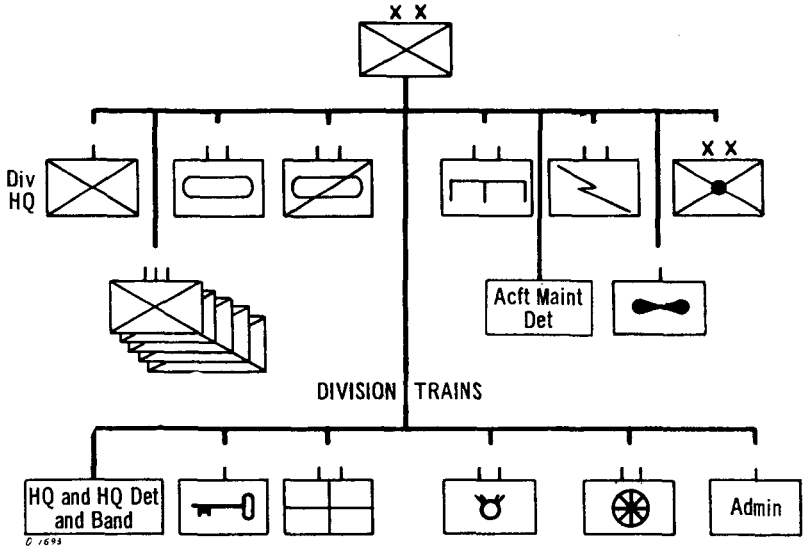
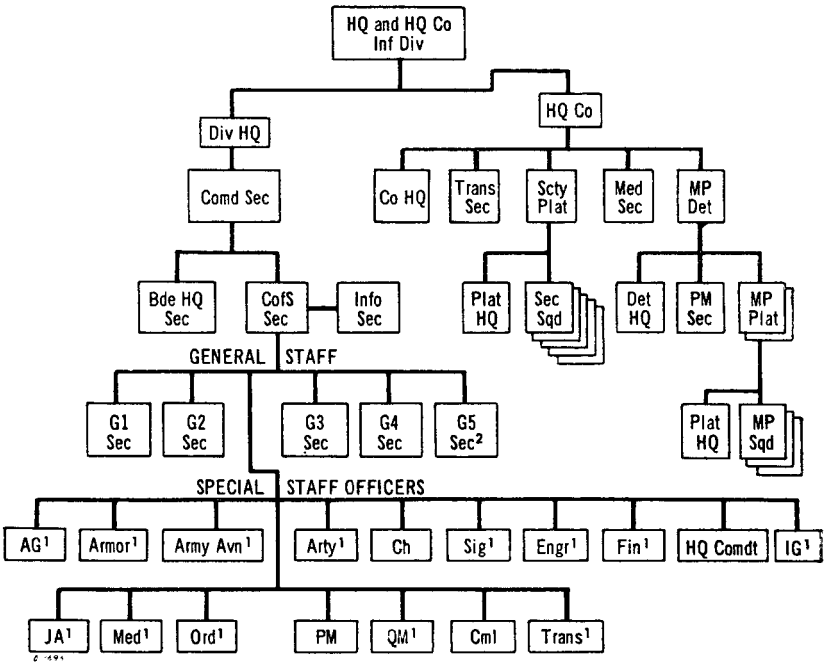


Figure 37. The infantry division (TOE 7D).

3. Headquarters and Headquarters Company, Infantry Division



[1]Strength shown in appropriate unit—not included in company TOE.
[2]When augmented.

Figure 38. Headquarters and headquarters company, infantry division (TOE 7–2D).

4. Battle Group

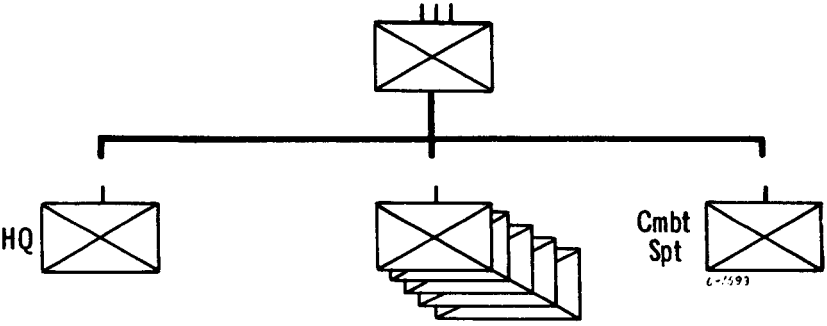


Figure 39. Battle group (TOE 7–11D).

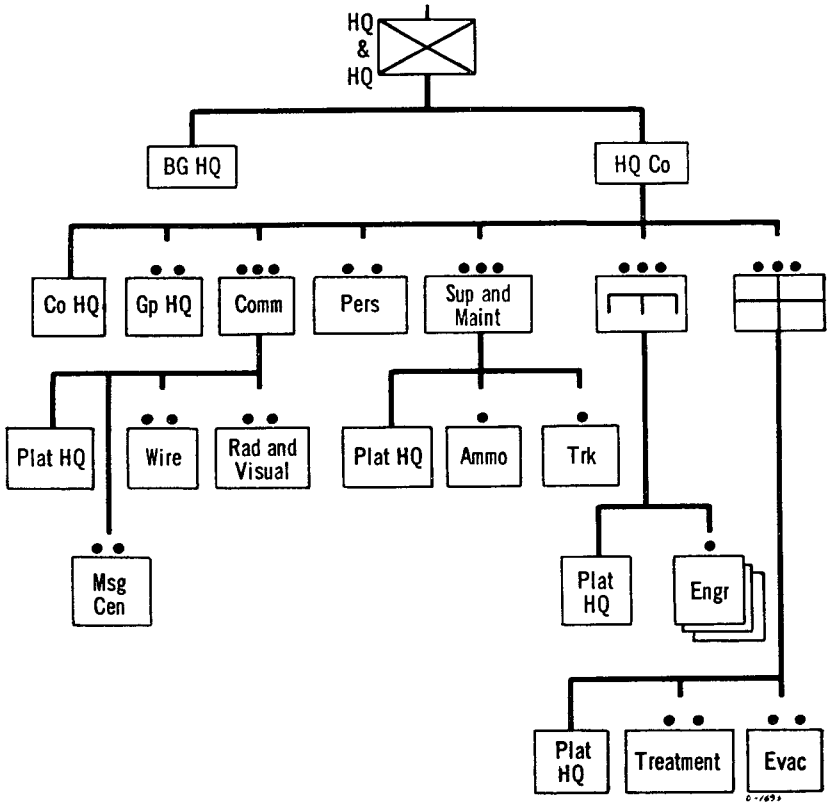


Figure 40. Headquarters and headquarters company, battle group (TOE 7–12D).

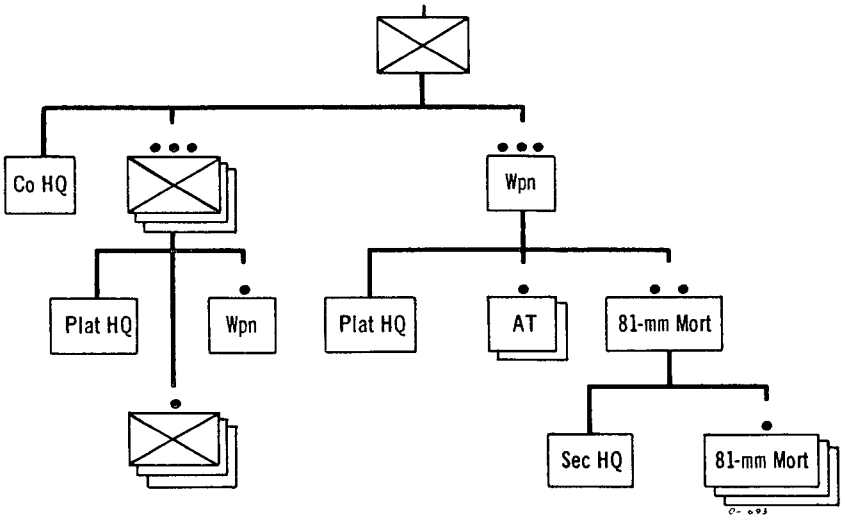


Figure 41. Rifle company, battle group (TOE 7–17D).

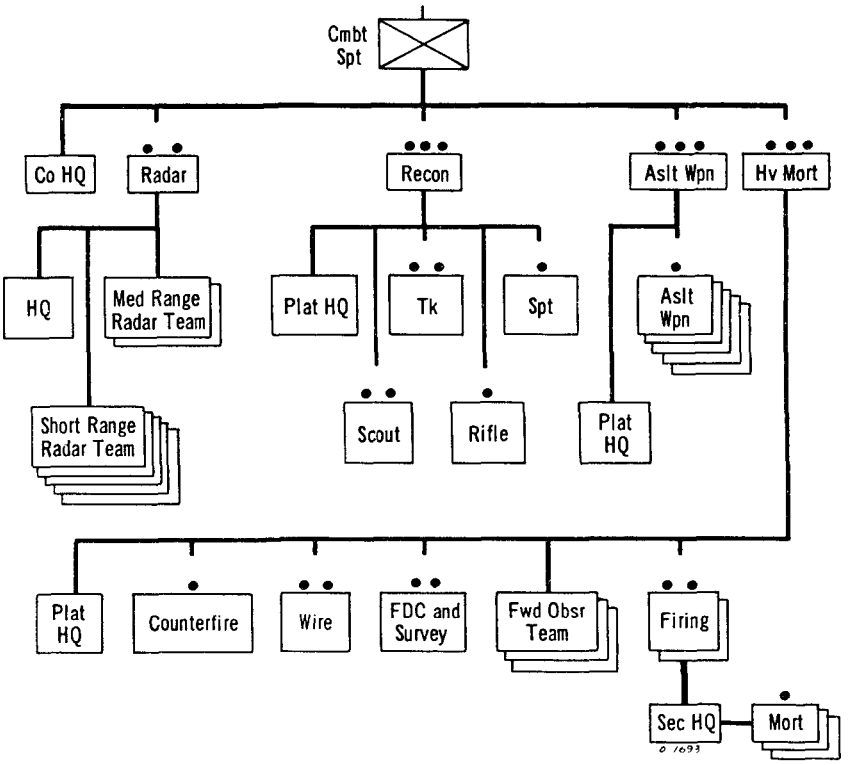


Figure 42. Combat support company, battle group (TOE 7–19D).

5. Armor Battalion, 90-mm

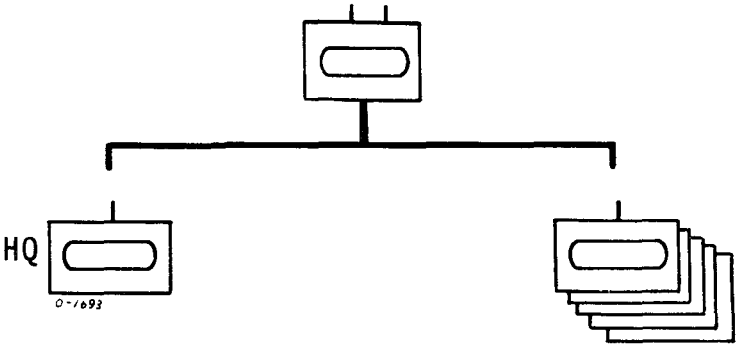


Figure 43. Armor battalion, 90-mm (TOE 17–65D).

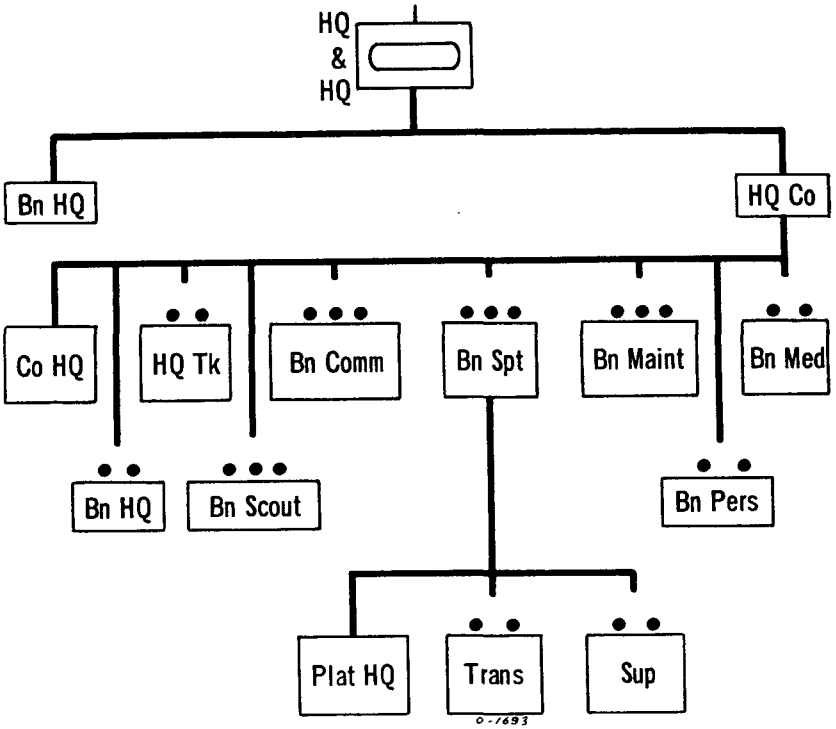


Figure 44. Headquarters and headquarters company, armor battalion, 90-mm (TOE 17–66D).

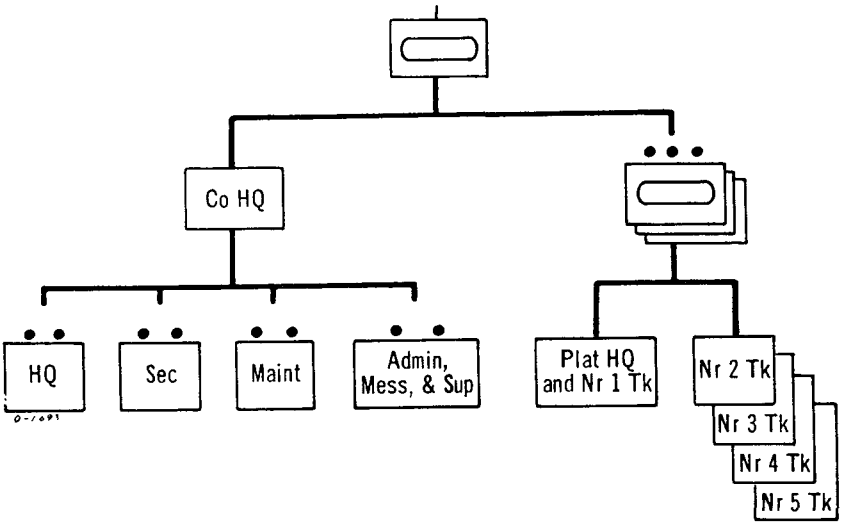


Figure 45. Medium tank company, armor battalion, 90mm (TOE 17–27D).

6. Cavalry Squadron

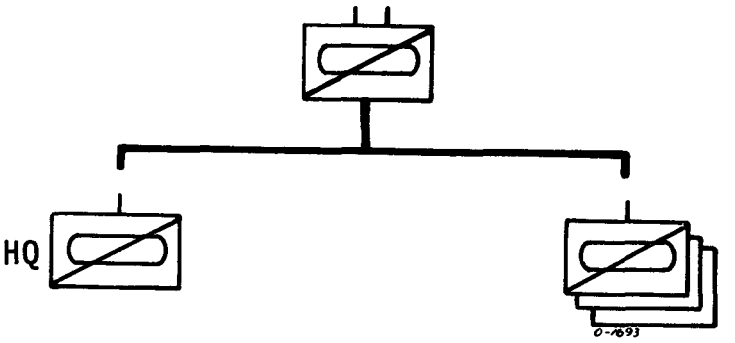


Figure 46. Cavalry squadron (TOE 17–85D).

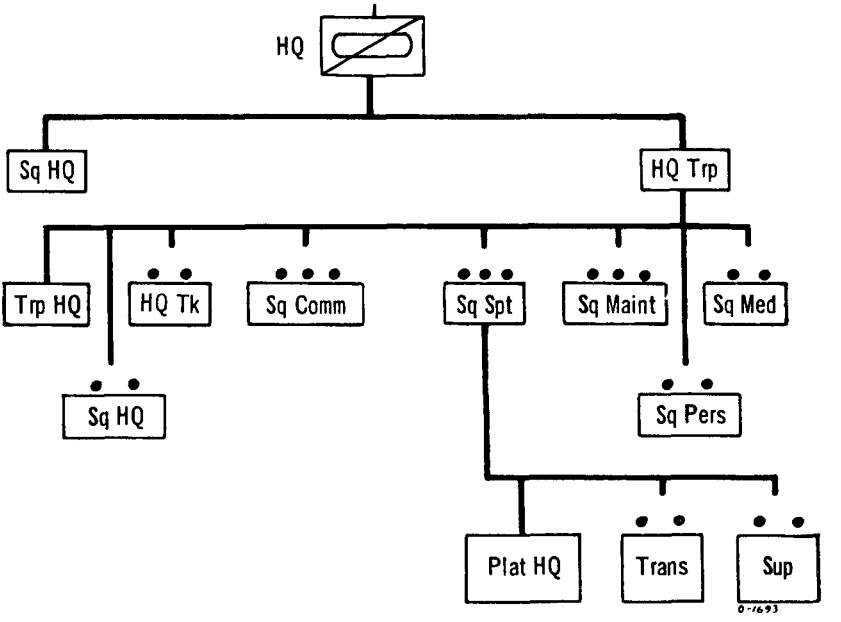


Figure 47. Headquarters and headquarters troop, cavalry squadron (TOE 17–86D).

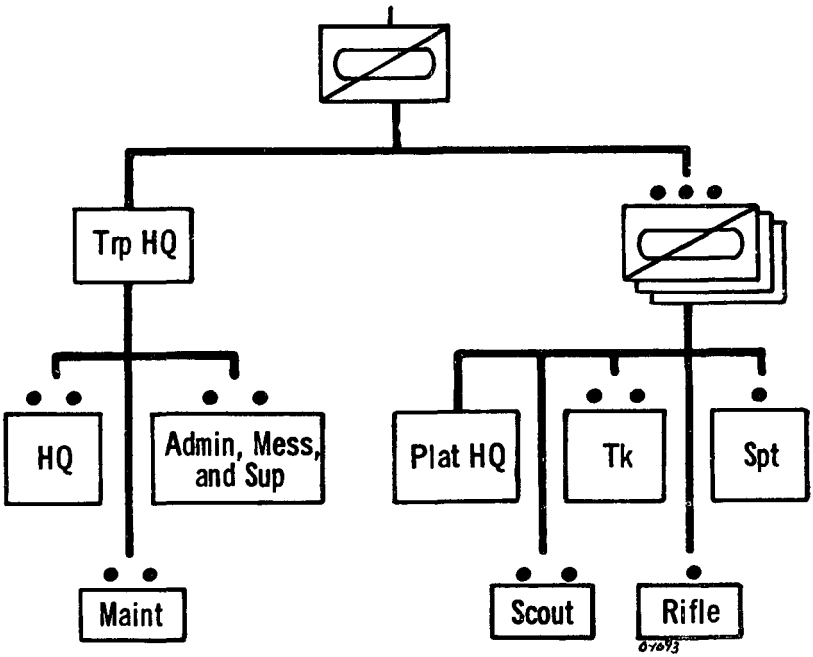


Figure 48. Armored cavalry troop (TOE 17–57D).

7. Engineer Battalion

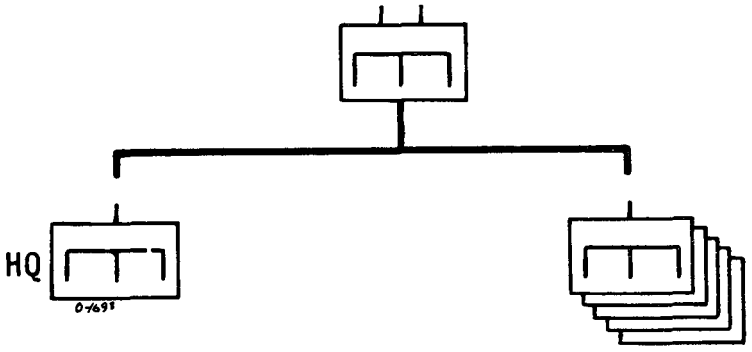


Figure 49. Engineer battalion (TOE 5–15D).

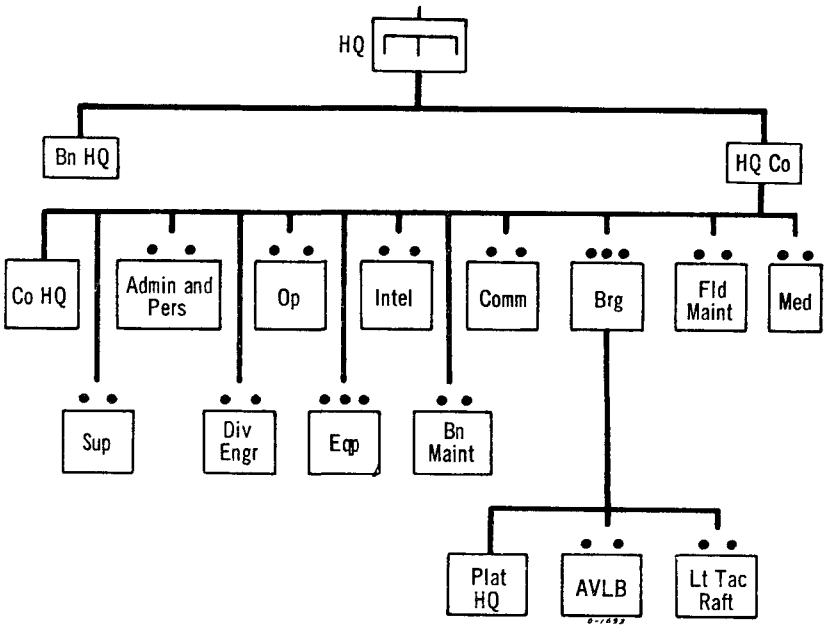


Figure 50. Headquarters and headquarters company, engineer battalion (TOE 5–16D).

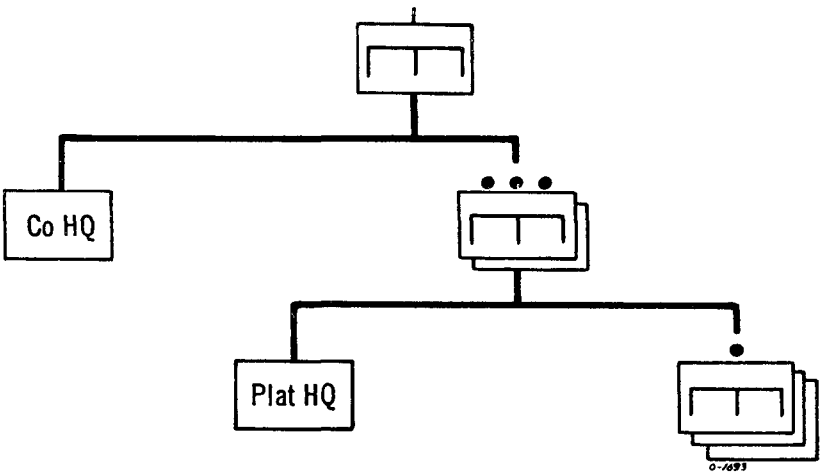


Figure 51. Engineer company, engineer battalion (TOE 5–17D).

8. Signal Battalion

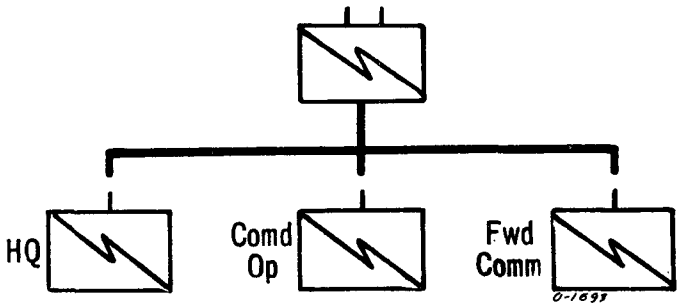


Figure 52. Signal battalion (TOE 11–5D).

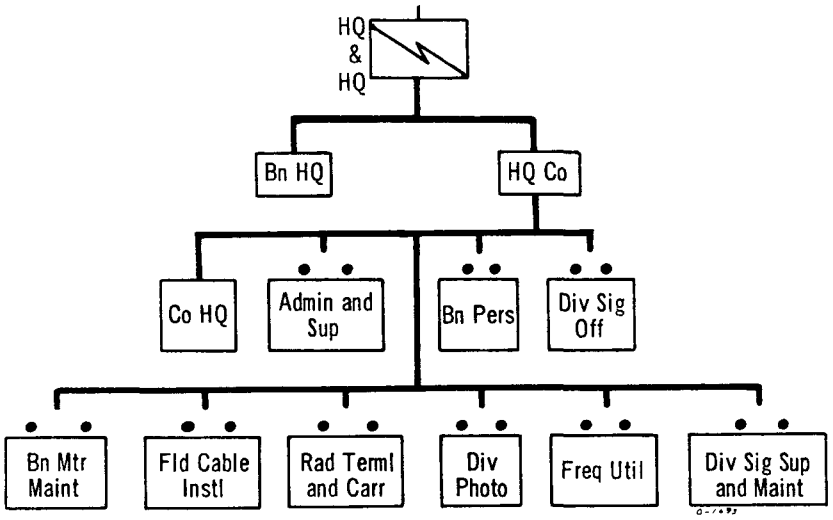


Figure 53. Headquarters and headquarters company, signal battalion (TOE 11–6D).

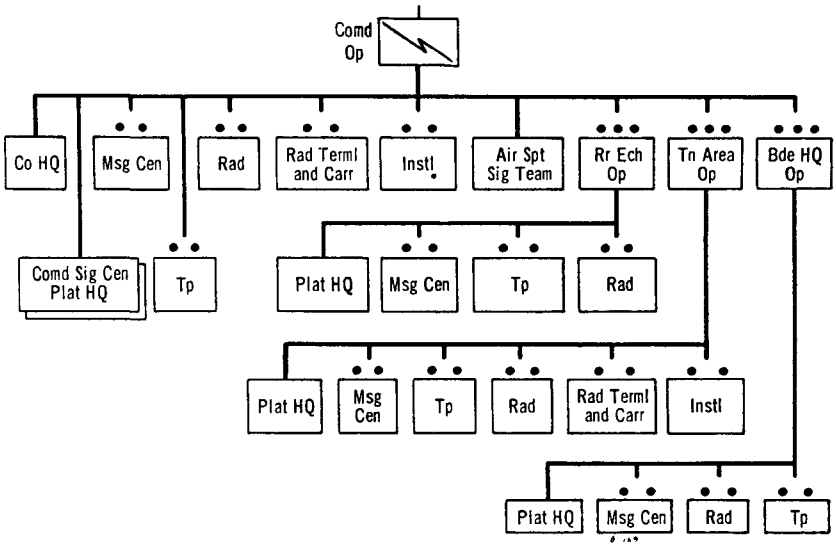


Figure 54. Command operations company, signal battalion (TOE 11–7D).

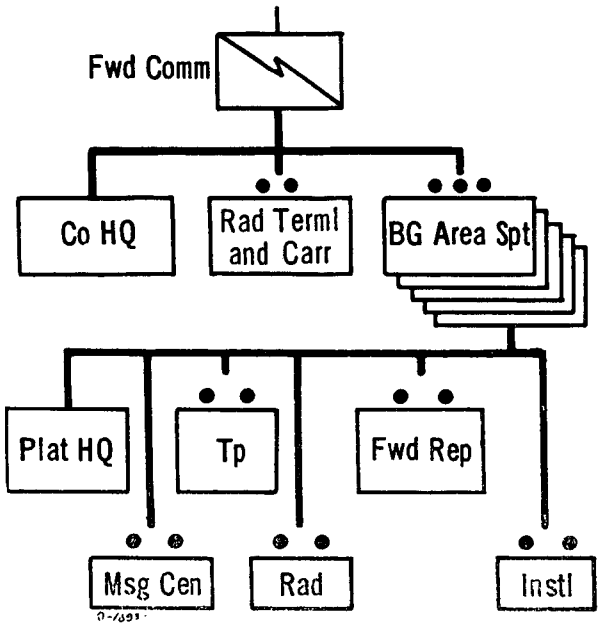


Figure 55. Forward communications company, signal battalion (TOE 11–8D).

9. Division Artillery

a. Completed division artillery.

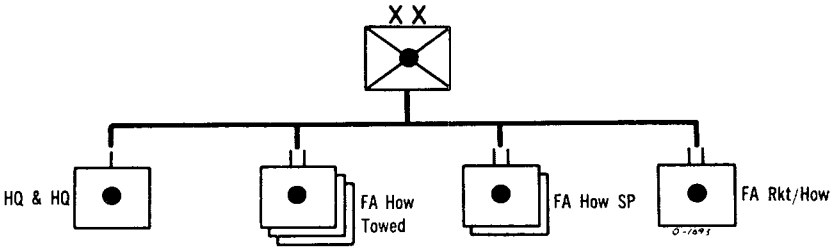


Figure 56. Division artillery (TOE 6–100D).

b. Headquarters and headquarters battery, division artillery.

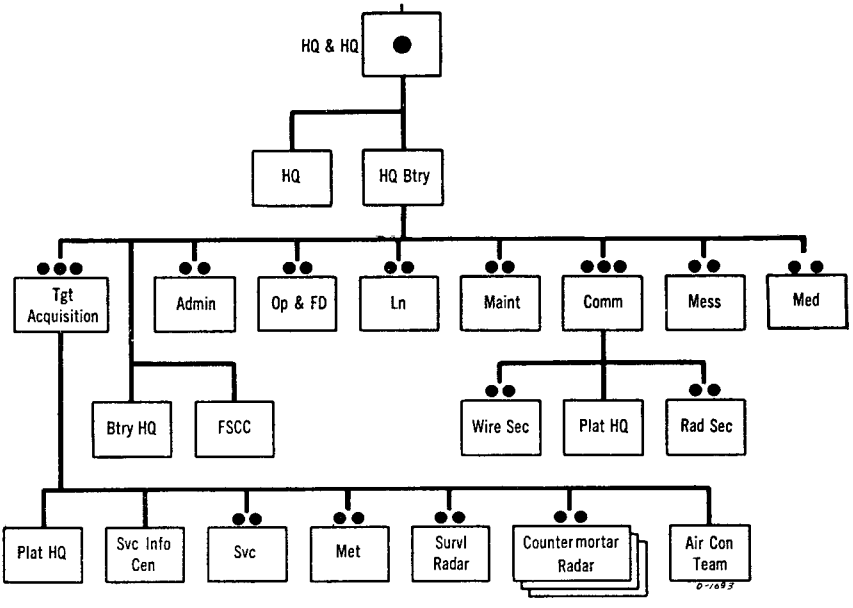


Figure 57. Headquarters and headquarters battery, division artillery (TOE 6–101D).

c. Field artillery howitzer battalion, towed.

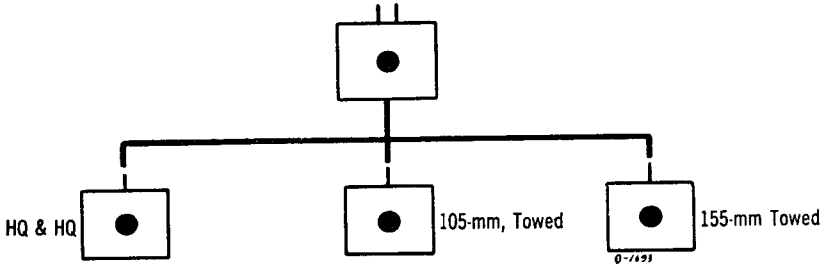


Figure 58. Field artillery howitzer battalion, towed (TOE 6–115D).

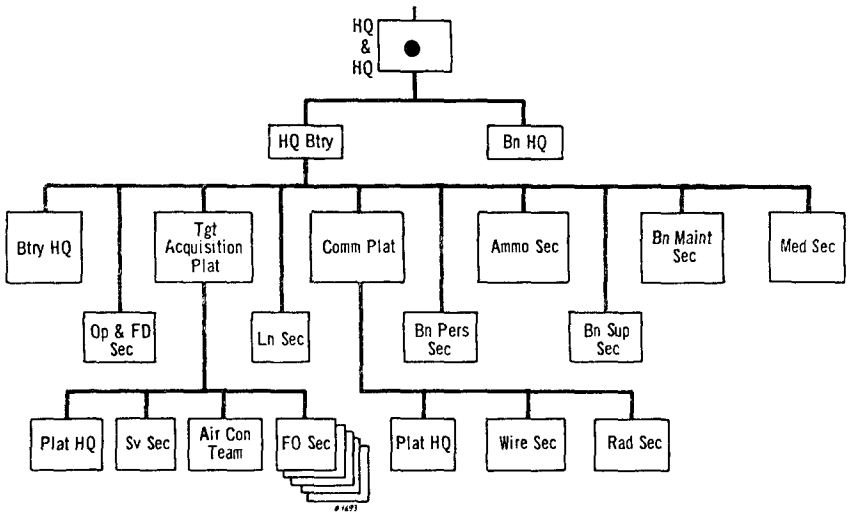


Figure 59. Headquarters and headquarters battery, field artillery battalion, towed (TOE 6–116D).

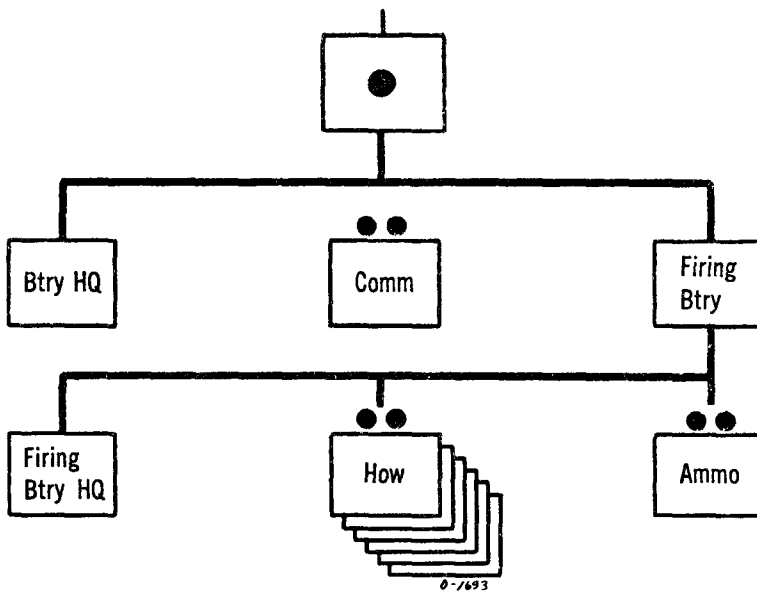


Figure 60. Howitzer battery 105-mm, towed (TOE 6–117D).

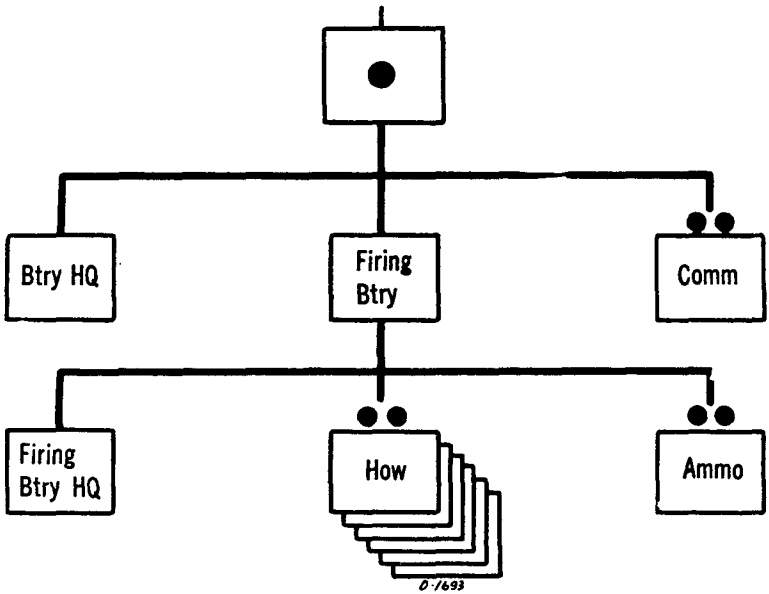


Figure 61. Howitzer battery, 155-mm, towed (TOE 6–118D).

d. Field artillery howitzer battalion, self-propelled.

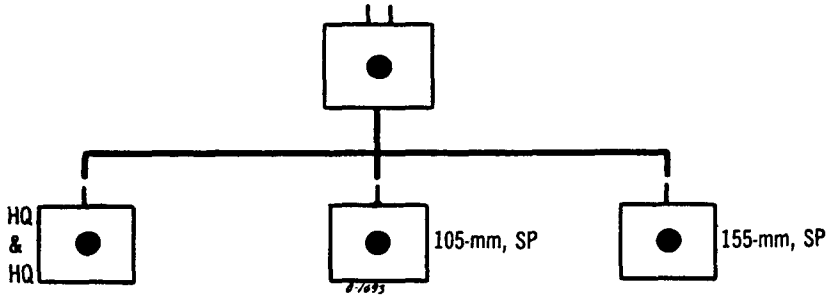


Figure 62. Field artillery howitzer battalion, self-propelled (TOE 6–125D).

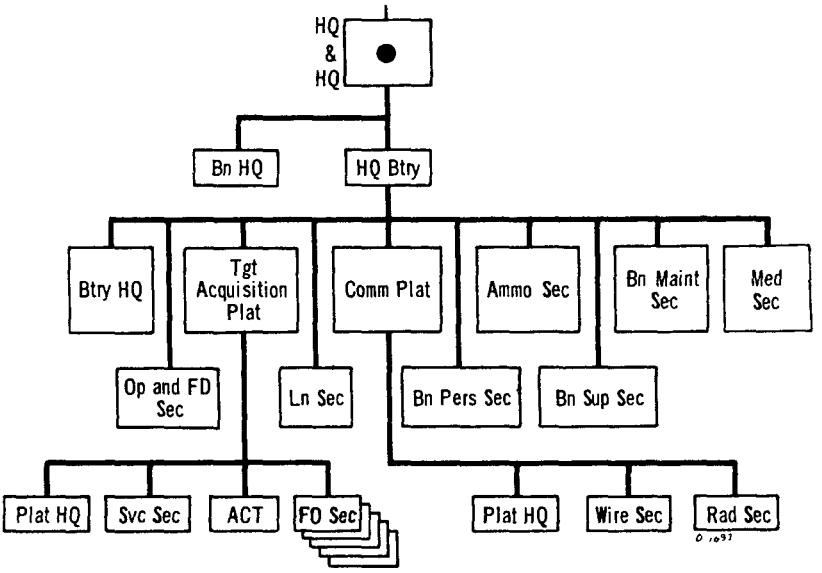


Figure 63. Headquarters and headquarters battery, field artillery howitzer bn, self-propelled (TOE 6–126D).

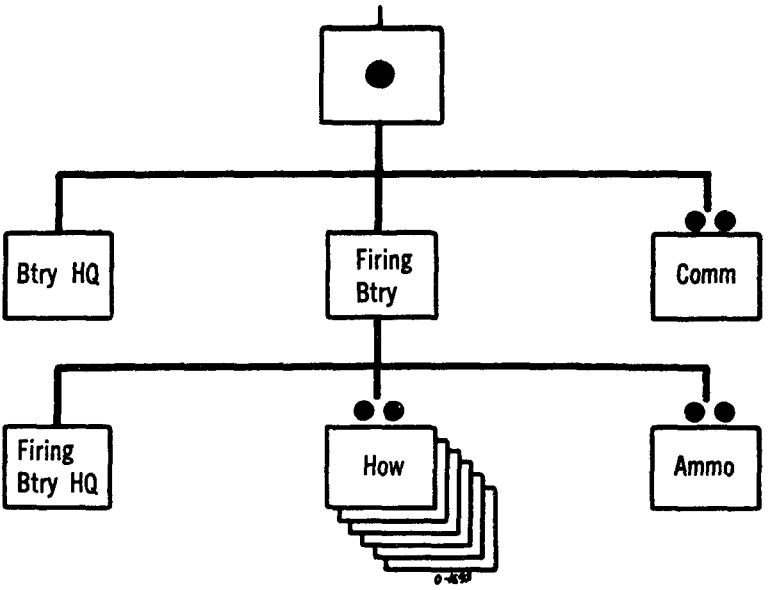


Figure 64. Howitzer battery 105-mm, self-propelled (TOE 6–127D).

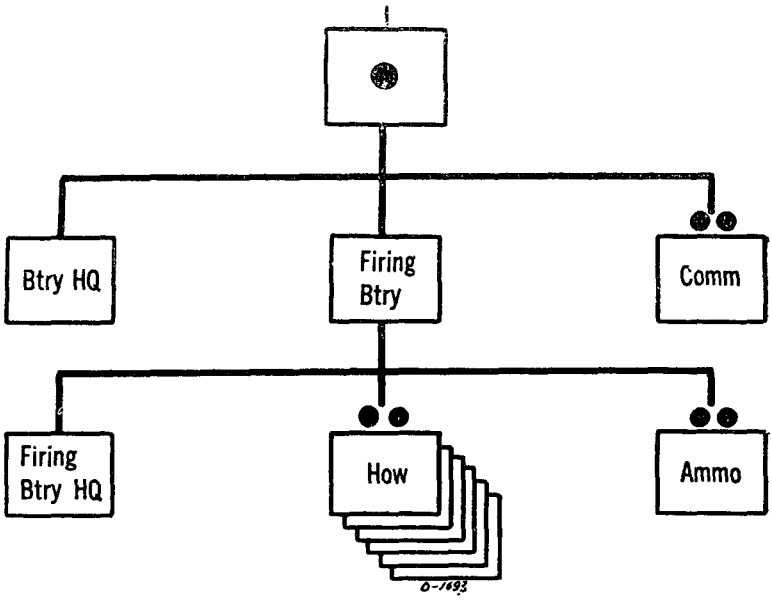


Figure 65. Howitzer battery 155-mm, self-propelled (TOE 6–128D).

e. Field artillery rocket/howitzer battalion.

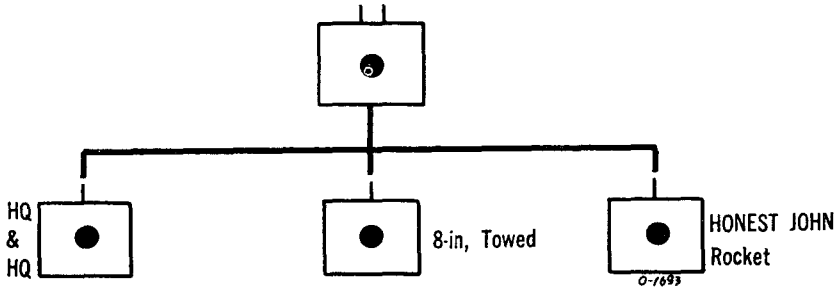


Figure 66. Field artillery rocket/howitzer battalion (TOE 6–135D).

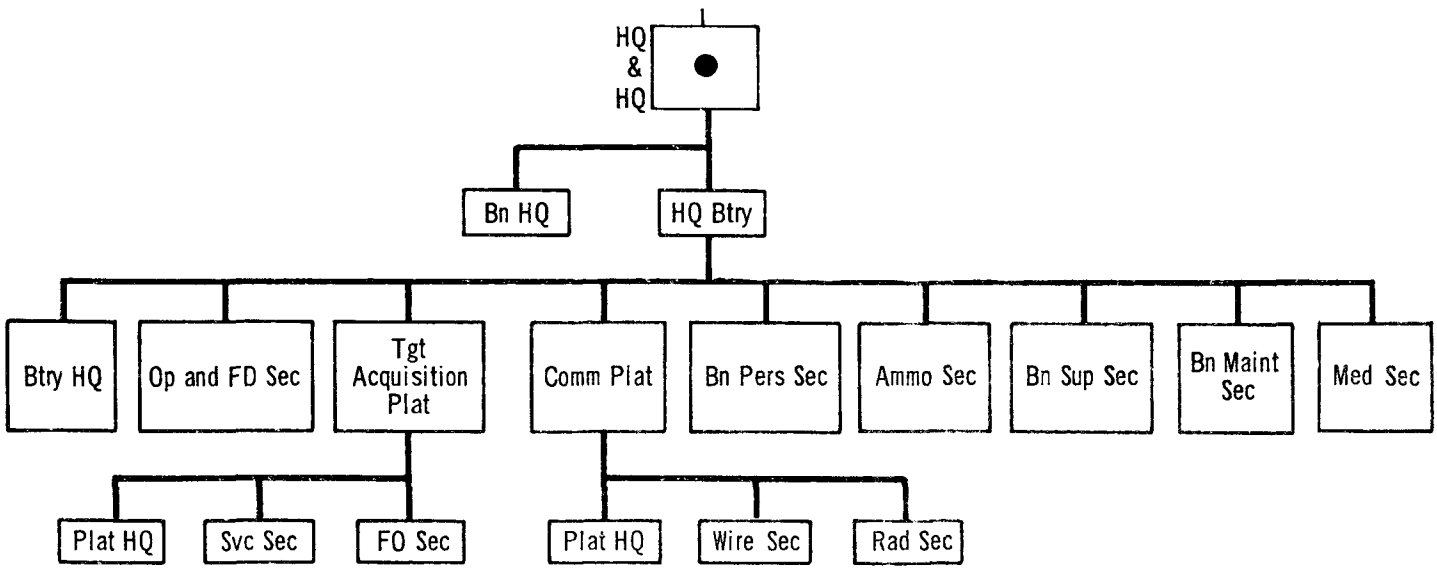


Figure 67. Heaquarters and headquarters battery, field artillery rocket/howitzer battalion (TOE 6–136D).

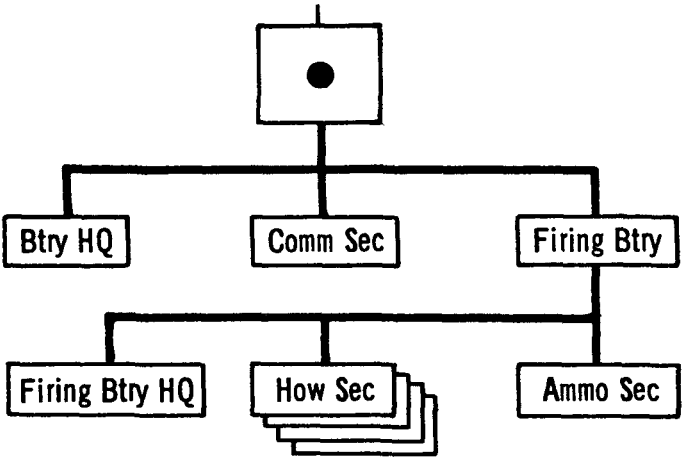


Figure 68. 8-inch howitzer battery, towed (TOE 6–137D).

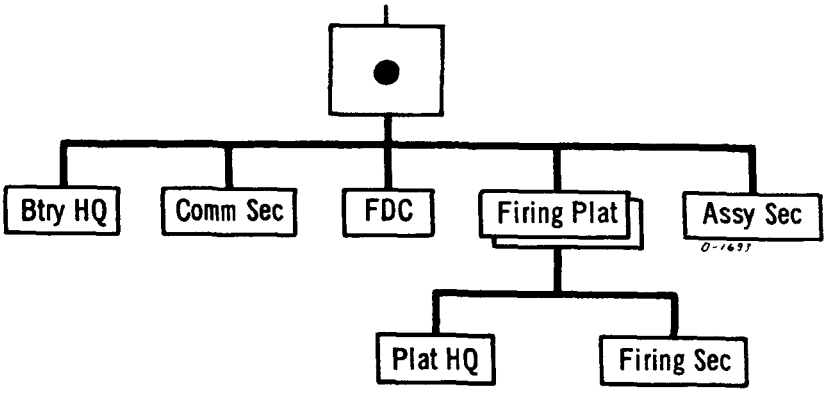


Figure 69. Field artillery missile battery, 762-mm rocket, self-propelled (TOE 6–138D).

10. Aviation Company

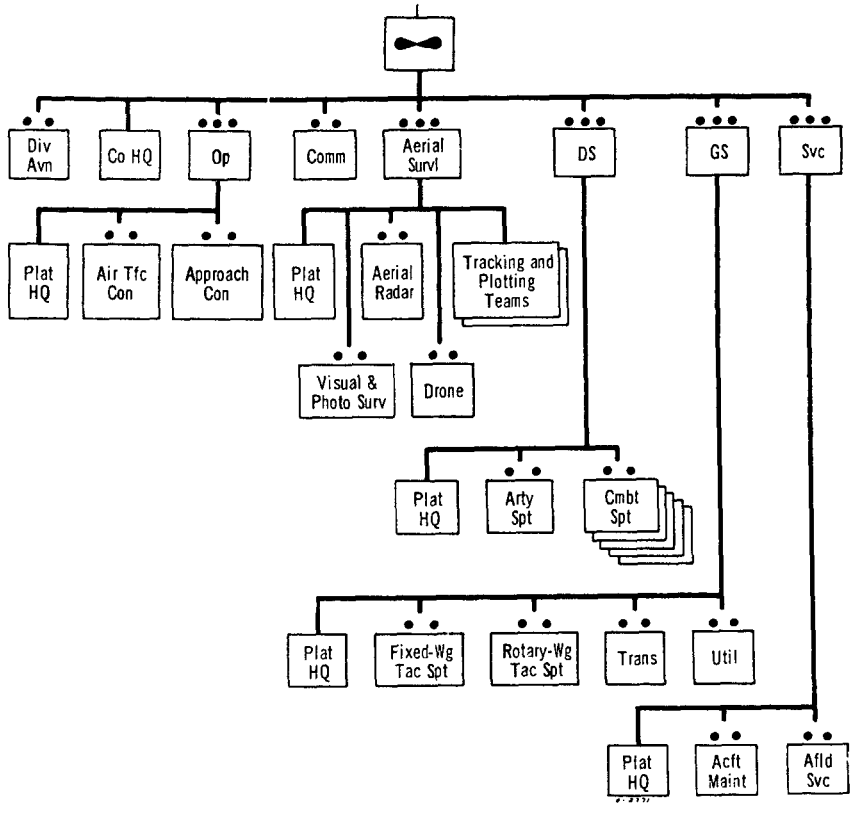


Figure 70. Aviation company (TOE 1-7D).

11. Division Trains

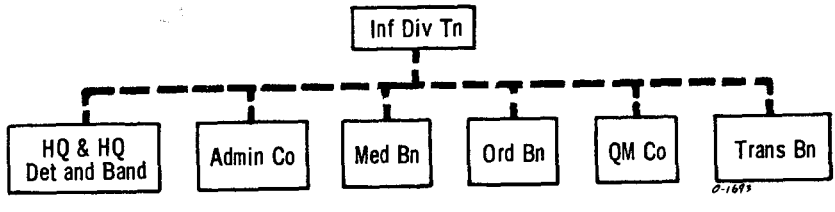


Figure 71. Division trains.

12. Headquarters and Headquarters Detachment, Division Trains, and Division Band

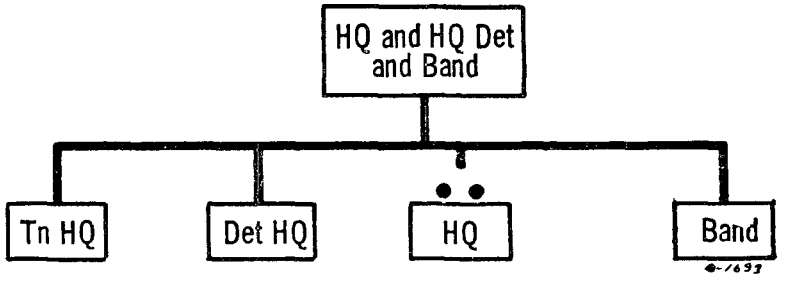


Figure 72. Headquarters and headquarters detachment, division trains, and division band (TOE 7–62D).

13. Administration Company

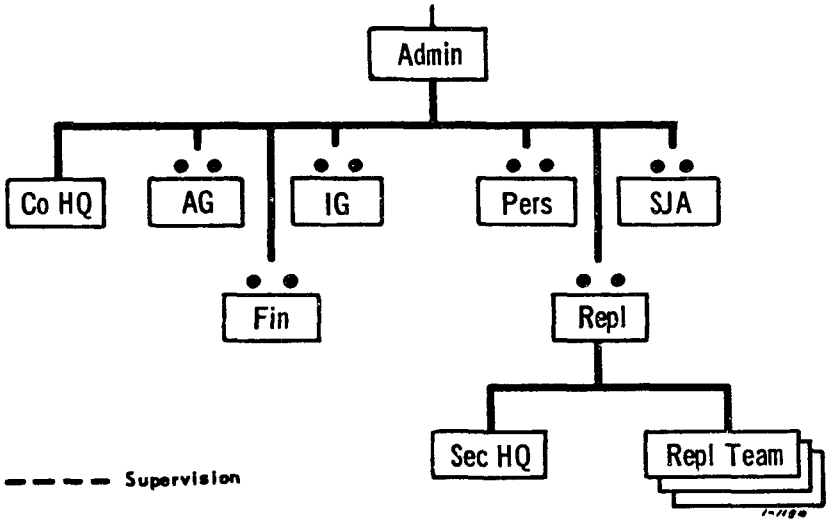


Figure 73. Administration company (TOE 12–7D).

14. Medical Battalion

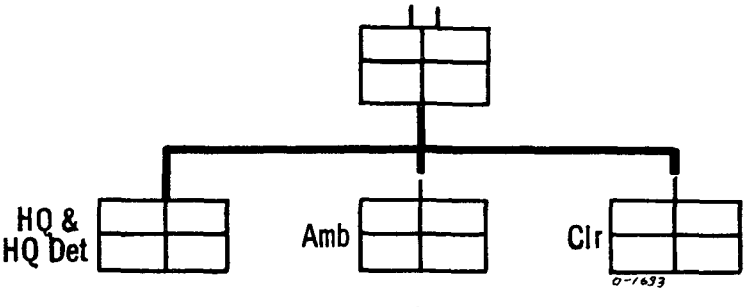


Figure 74. Medical battalion (TOE 8–15D).

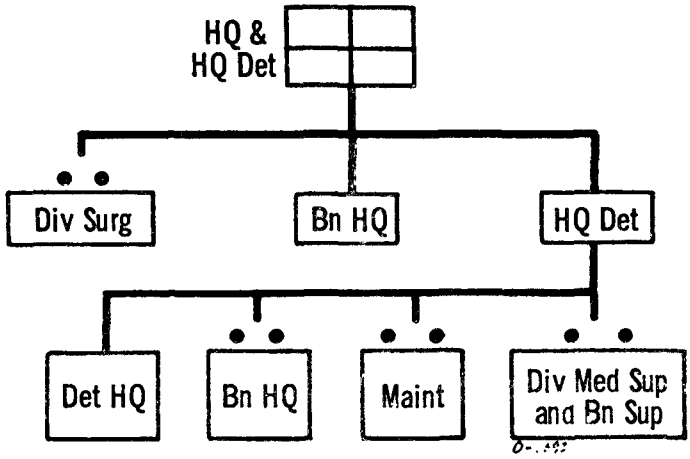


Figure 75. Headquarters and headquarters detachment, medical battalion (TOE 8–16D).

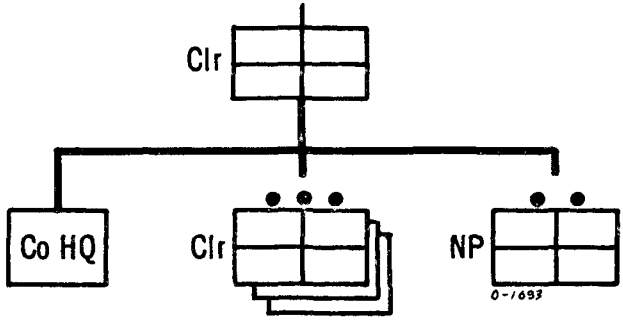


Figure 76. Clearing company, medical battalion (TOE 8–18D).

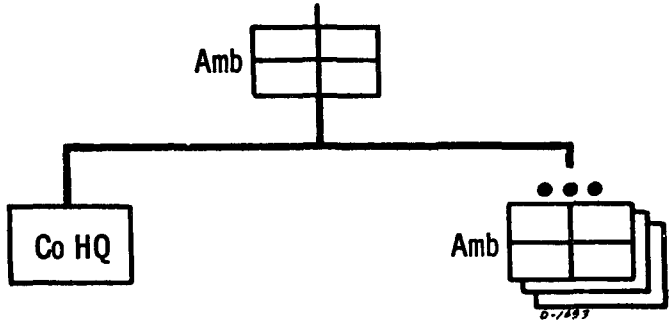


Figure 77. Ambulance company, medical battalion (TOE 8–17D).

15. Ordnance Battalion

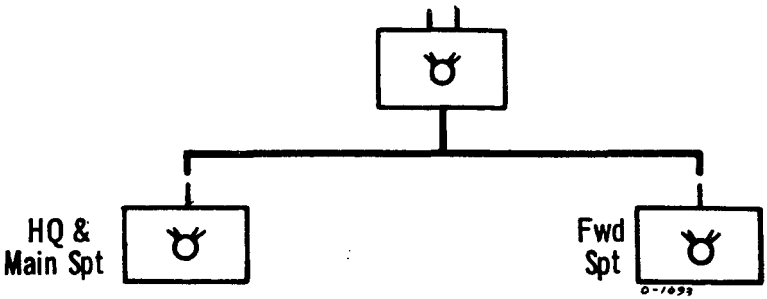


Figure 78. Ordnance battalion (TOE 9–25D).

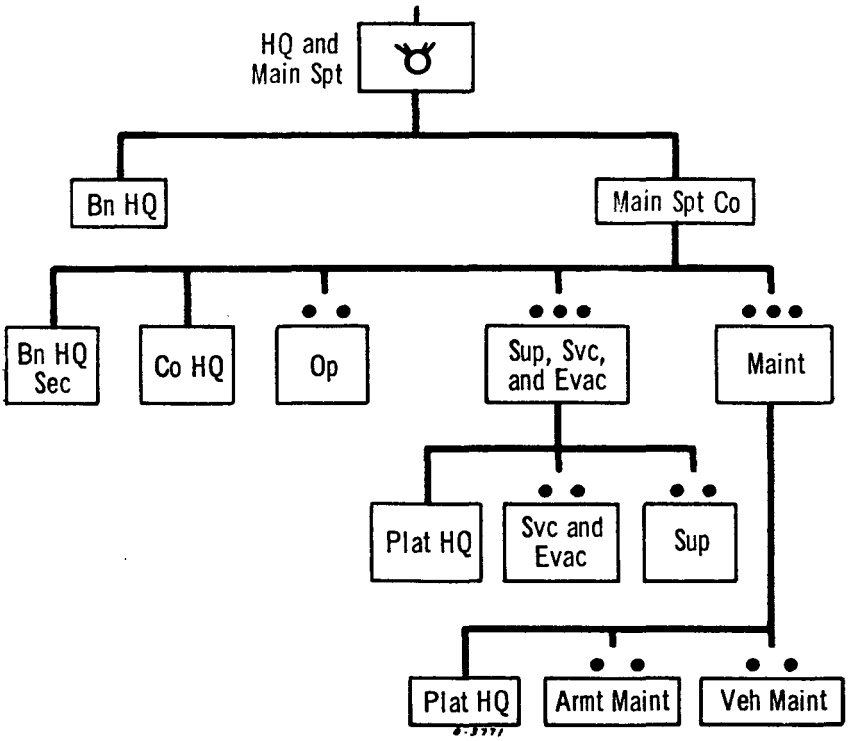


Figure 79. Headquarters and main support company, ordnance battalion (TOE 9–26D).

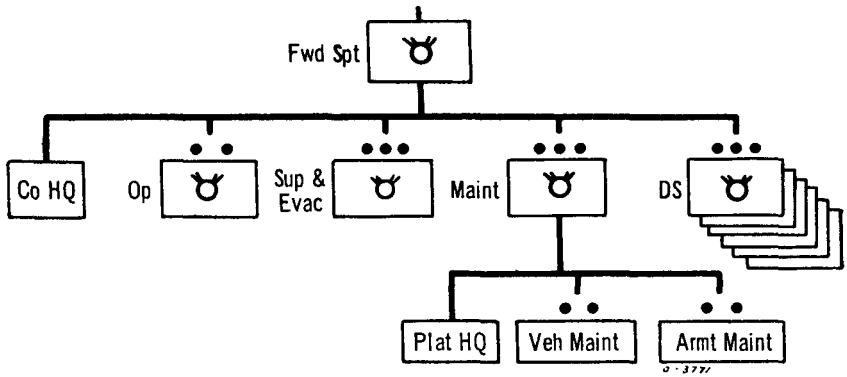


Figure 80. Forward support company, ordnance battalion (TOE 9-27D).

16. Quartermaster Company

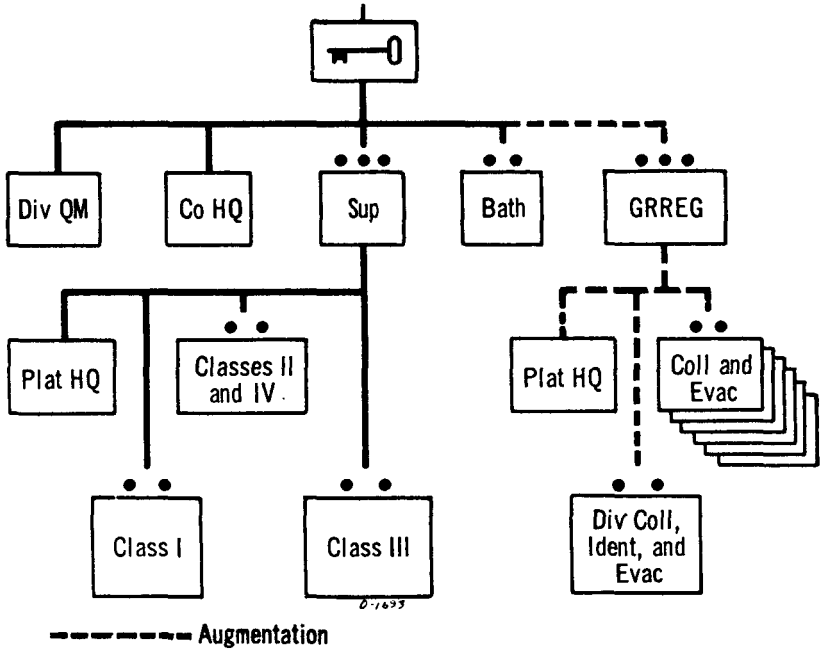


Figure 81. Quartermaster company (TOE 10-17D).

17. Transportation Battalion

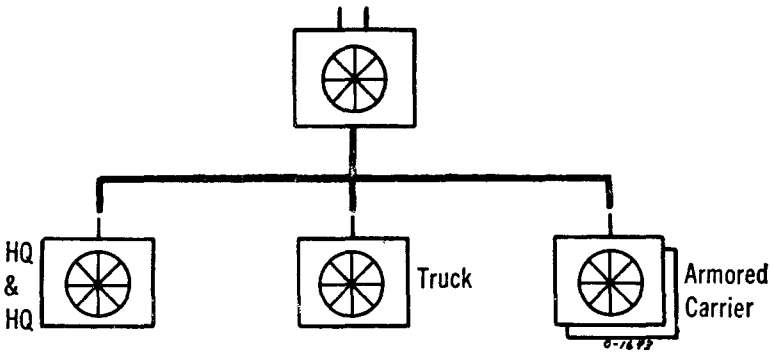


Figure 82. Transportation battalion (TOE 55–75D).

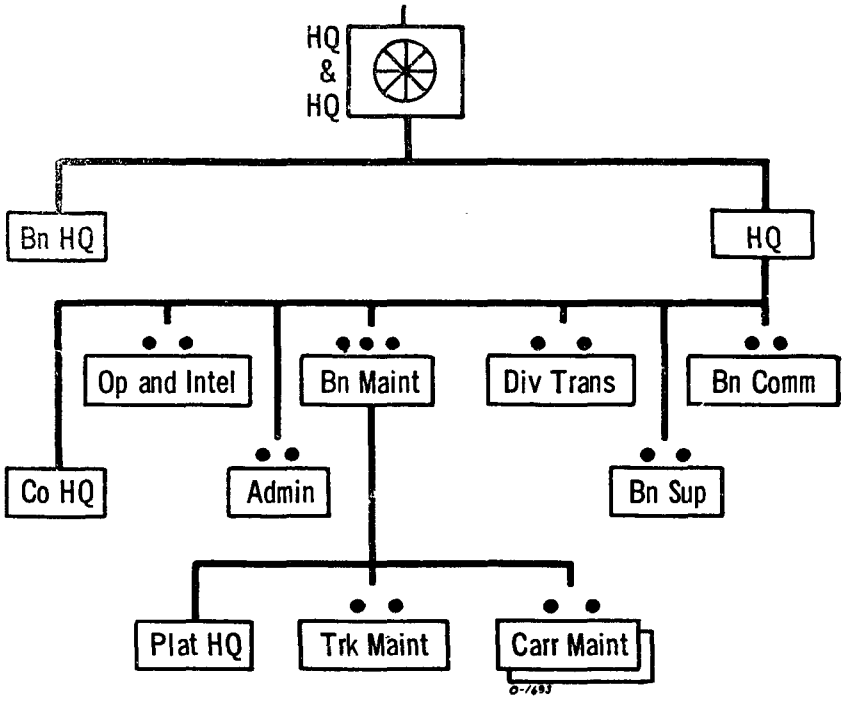


Figure 83. Headquarters and headquarters company, transportation battalion (TOE 55–76D).

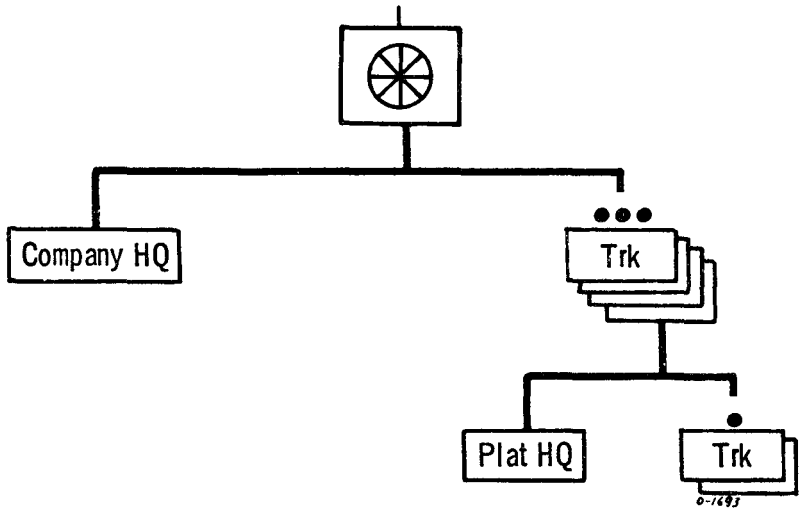


Figure 84. Truck transport company, transportation battalion (TOE 55–77D).

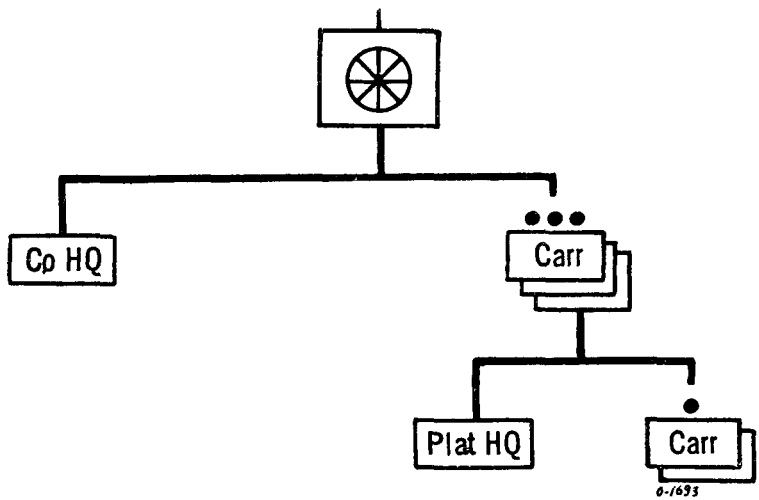


Figure 85. Armored carrier company, transportation battalion (TOE 55–78D).

18. Aircraft Maintenance Detachment

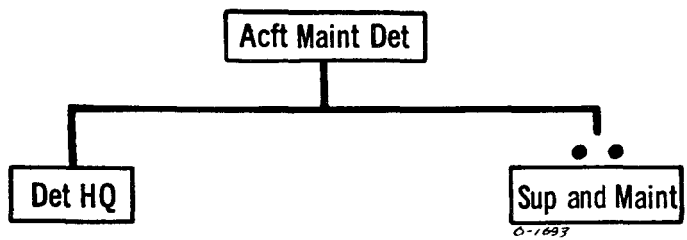


Figure 86. Infantry division transportation aircraft maintenance detachment (TOE 55–79D).

APPENDIX III
EXAMPLE OF STANDING OPERATING PROCEDURES, INFANTRY DIVISION

(Classification)

20th inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19__

STANDING OPERATING PROCEDURES
NO._____

COMBAT OPERATIONS

1. GENERAL

A. Purpose. This SOP is published to standardize routine recurring operational and administrative procedures within div. Div SOP applies except when modified by div order.

B. Conformity. Subor units SOP will conform.

C. Organization.

1. The following tactical grouping will normally be used in determining attachment to or support of major units indicated; artillery support will be provided in accordance with assigned missions.

a. 1st BG, 61st Inf.
   (1) Co A, 1st Med Tk Bn, 1st Armor.
   (2) Co A, 29th Engr Bn.
   (3) 1st Plat, Co B, 20th Sig Bn.
   (4) 1st Plat, Co A, 20th Ord Bn.
   (5) DS Spt Sec, 20th Avn Co.

b. 2d BG, 62d Inf.
   (1) Co B, 1st Med Tk Bn, 1st Armor.
   (2) Co B, 20th Engr Bn.
   (3) 2d Plat, Co B, 20th Sig Bn.
   (4) 2d Plat, Co A, 20th Ord Bn.
   (5) DS Spt Sec, 20th Avn Co.

(Classification)

c. 3d BG, 63d Inf.
(1) Co C, 1st Med Tk Bn, 1st Armor.
(2) Co C, 20th Engr Bn.
(3) 3d Plat, Co B, 20th Sig Bn.
(4) 3d Plat, Co A, 20th Ord Bn.
(5) DS Spt Sec, 20th Avn Co.

d. 4th BG, 64th Inf.
(1) Co D, 1st Med Tk Bn, 1st Armor.
(2) Co D, 20th Engr Bn.
(3) 4th Plat, Co B, 20th Sig Bn.
(4) 4th Plat, Co A, 20th Ord Bn.
(5) DS Spt Sec, 20th Avn Co.

e. 5th BG, 65th Inf.
(1) Co E, 1st Med Tk Bn, 1st Armor.
(2) Co E, 20th Engr Bn.
(3) 5th Plat, Co B, 20th Sig Bn.
(4) 5th Plat, Co A, 20th Ord Bn.
(5) DS Spt Sec, 20th Avn Co.

f. 1st Recon Sq, 21st Cav.

g. Div trp.
(1) Div HQ & HQ Co (–).
(2) 20th Sig Bn (–).
(3) Div Arty (–).
(4) 1st Med Tk Bn (–).
(5) 20th Engr Bn (–).
(6) Det, 20th Med Bn.
(7) 20th Avn Co (–).
(8) Transportation aircraft maintenance Detachment.

h. Div tn.
(1) HQ & HQ Det, Div Tn.
(2) Band Sec.
(3) MP det, Div HQ & HQ Co.
(4) 20th Med Bn (–).
(5) 20th Ord Bn (–).
(6) 20th QM Co.
(7) Tn Area Op Plat, 20th Sig Bn.
(8) 20th Trans Bn; 20th Admin Co.

2. Div HQ.
a. Tac CP. CG; aides; G2, G3; div arty rep; sig off; other

staff off as CG deems nec; security escort; and operating pers.

b. Main CP. (Includes pers in tactical CP when latter is not operating separately) CG; aides; CofS; G1, G2 (and special teams) G3, G4, G5 secs; FSCC; CBRC; cml, engr, Army avn, pub info PM, sig secs, surg sec (–); HQ Comdt; LO; command op co (–), sig bn; AG and MP det. Others as designated.

c. Alternate CP. Asst div comdr; aide; bde HQ; rep sp stf sec when directed; bde hq op plat; sig bn.

d. Rear echelon. Admin co; AG (–), IG, SJA, Fin, repl sec, and pers sec; info sec (–) ch; sig (–); div admin cen (unit pers sec); rear ech op plat.

D. Combat Orders, Reports, and Distribution.

1. OPORD limited in distr to maj comd, sep task force, bn and sep co. Others informed by comdr or LO.

2. Distr A, when used, incl—
Corps or army
Atch units
Spt units
Adjacent units
Brigade
Ea battle group
Ea Bn, sq, and sep co
Div arty
Div tn
Ea gen and sp staff sec
File

3. Div sig off will assign msg ref number for OPORD, annex appendix tab, and incl thereto. When annex, appendix, tab, or incl is to receive the same distr and be issued at the same time as the basic order, it will bear the same msg ref number. When annex, appendix, tab, or incl is to receive a different distr or be issued before or after the basic order, it will bear a sep msg ref number.

4. Maj subor units deliver 2 copies of OPORD to G3.

II. COORDINATION OF TACTICAL OPERATIONS

A. Command and Control.

1. Command Posts.

a. Maj units select and rept loc and time of opening and closing Rept loc of CP airstrips with ea change in CP loc.

b. During move HQ remain operational.

c. To reduce the possibility of multiple loss of maj HQ as a result of en use of nuclear wpn, maj comd HQ will maintain a min of 5,000 yd dispersion from ea other.

d. In the event of the destruction or temporary neutralization of div main CP; in the absence of specific instr, div comd fac will be reestablished by fol HQ in accordance with the sequence in which they are listed:

(1) Altn Div CP.

(2) HQ, div arty.

(3) HQ, uncommitted BG, or any centrally loc BG selected by the div (or acting div) comdr, based on suitability of loc and adequacy of comm fac.

e. Maj subor units will estab sequence and rept to div.

f. When a HQ fac has been destroyed or neutralized, the senior surviving comdr within the comd affected will move to the new HQ fac and assume comd. Pending the arrival of such senior surviving comdr, comd will be exercised by the comdr of the HQ which has become the new CP.

g. Surviving staff pers of a HQ which has been destroyed or neutralized will promptly move to the new HQ.

2. Liaison and coordination.

a. CofS's asst operates in fac.

b. LO from BG, div tn, sep bn and sq and atch tac units not atch to subor comd rept to CofS prior to march or combt op.

c. From supporting unit to supported unit, unit to HQ to which unit is atch, and laterally between units from left to right. Div flank units will estb and maint ln with adjacent parallel HQ.

d. G3 will provide a sit map for LO fac.

3. Signal communication.

a. General.

(1) Rept immed loss or compromise of current SSI or SOI.

(2) Responsibility for estb sig circuits: higher to lower, left to right, and supporting to supported, unless otherwise specified by div order.

b. Radio.

(1) Radio restricted (netting and flash or operational immed msg permitted) when radio relay and/or wire comm estb.

(2) Listening silence (transmitter turned off; receiver on) or radio silence (transmitter and receiver turned off) when prescribed.

B. Intelligence.

1. Prisoners of war.

a. Capturing units interrogate POW (to include wounded) briefly for info of immed value. POW found to have any knowledge of en nuclear cml, or biological actv will be segregated and rept to G2 immed. All other interrogation by IPW teams at div POW coll pt and div clearing sta.

b. POW will not be allowed to eat, smoke, drink, or rest prior to arrival at div POW coll pt, except when such treatment would be inhumane.

c. En off, field grade or higher and selected off and NCO to div POW coll pt without delay.

d. Rept immed to G2 capture to en aircrews and guided missile, cml, and biological nuclear wpn pers. No interrogation beyond ident.

2. Captured documents. Crypto material and documents containing info on nuclear, cml and biological wpn delivered immed to G2. Other documents through S2 except as below. All documents marked with date, time and place found or captured, incl name and rank of POW. Documents found on POW will be carried by prisoner's escort to div coll pt. Tech documents found with captured eqp will be kept with eqp.

(Classification)

3. Technical intelligence.
   a. Rept of new or unusual en eqp, armament, nuclear material, or gases forwarded immed to G2 with brief description. En mat related to nuclear warfare will be evac only to avoid recapture. Cptr or crashed en afct rept immed to G2 and guarded by discovering unit.
   b. Captured en mat promptly rept by capturing unit, inspected by TSIT, and evac by interested tech svc.
4. Maps and terrain models. Requisitions in excess of prescribed allowance to div engr, through G2, for approval.
5. Weather. G2 obtains and disem wea reports to div staff and to major subor HQ.
   a. Normal weather reports will be accomplished twice daily or as deemed necessary for operations.
   b. Special reports:
      (1) Division area and route flight forecasts to be accomplished four times daily.
      (2) Forecasts for radiological defense as required.
      (3) Forecasts every two hours to include winds and other data required for nuclear weapons employment.
      (4) Severe weather warnings as required.
6. Reconnaissance.
   a. General.
      (1) Observation and combat surveillance. Rept loc of all OP and surveillance OP to G2.
      (2) Flash msg: Use flash msg rept for approach of en armor, acft, naval or amph landing craft, abn trp or en nuclear or CB atk. Incl number, type, loc, dir of mov, speed, altitude (if applicable), time observed, and ident of observer. For nuclear flash msg rept, see Anx C, Actions to minimize Effects of En Nuclear Atk.
      (3) Rept immediately—
         (a) Known or suspected en trp concentrations which may be suitable for nuclear atk, or indication of their existence or development.
         (b) En countermeasures incl, but not limited to, issue of sp protective clo to trp in fwd area, construction of unusually deep or covered foxholes, or sp shelters defiladed in rear of forward pos.

(Classification)

(c) Indication of en use of nuclear wpn, such as presence of sp trp units in area, registration of very heavy arty, limited withdrawal of forward units w/o any apparent tac reason, use of smoke cover on own forward trp, use of guided missiles and/or large rockets with HE warheads.

(d) Effect of our nuclear wpn. Est en casualties, eqp, and veh destroyed or rendered unusable, extent of area affected, and any obstacles to our mov created.

(e) First contact with en; initial en arty fire and marked change in vol of arty fire; changes in en disposiitons, incl changes of co or larger, catk indications, and change in enemy cmbt attitude; loss of contact; initiation of hostile atk; ident of new en units; loc of barriers, en minefields, demolitions, obstacles, and other defensive works; info on CB activities; known or suspected espionage, sabotage, or subversion.

b. Ground.

(1) Patrols coordinated by each higher HQ. BG, sq, and bn rept night patrol routes to G2 by 1800 hours.

(2) Constant surveillance of enemy activities and movement will be maintained by ground electronic units.

(3) SHELREP, MORTREP, and BOMREP to nearest arty HQ immed.

c. Air.

(1) Requests.

Air requests for preplanned visual and photographic reconnaissance must be submitted to Division G2 Air by 1600 hours daily. Immediate aerial reconnaissance requests may be submitted at any time.

(2) Reports.

(a) Commanders receiving direct support from organic aviation will coordinate visual aerial reconnaissance reports through G2 Air.

(b) All flying personnel, regardless of the type mission flown, will report all intelligence information observed to the G2 Air.

(c) All flying personnel will be briefed by the G2 Air prior to takeoffs, and debriefed after landing.

(d) Whenever necessary, the requesting unit will assist the G2 Air in the briefing of the pilot, observer and/or aerial photographer.

7. Counterconnaissance and counterinfiltration.

a. Civilians. Civ infiltrating through div zone or sector to or from en occupied territory will be apprehended and turned over to CIC.

b. Unoccupied areas. Unoccupied areas between unit pos or axes will be reconnoitered periodically employing gnd or air patrols as aprop. Max use of ground surveillance equipment.

c. Night illumination. See annex A Fire Spt Coord.

8. Counterintelligence.

a. Units check evac instl, biv, and assy areas to insure no classified or ident mat left.

b. Pass system estb in conformity with div sec plan. Con meas and guard system inspected and tested frequently.

c. CP and directional signs use brevity code titles.

d. Known or suspected loss or compromise of codes or other classified mat will be rept immed to G2.

e. Comm security:

(1) Units rept capture of comm instl to div G2 immed.

(2) Codes not auth by SOI will not be used.

(3) Other comm security as per SSI.

f. Div HQ will direct periodic aerial and ground photo checks in div zone to insure that aprop cam meas are being taken.

g. Sec of nuclear wpn and delivery units will be coordinated with op and counterintelligence plans.

h. Capture of any friendly pers specially trained in nuclear warfare will be rept to G2 without delay.

i. Suspected en agents will be rept immed to G2.

j. Recovered US or Allied mil pers claiming to have escaped from the en or evaded capture behind en lines will be evac immed to div G2.

k. Coord feints, demonstrations and ruses with this HQ.

9. Tactical propaganda. Surrender of sizable number of en pers or marked decrease in the combat effect of en trp or units as a result of friendly use or threatened use of nuclear wpn will be rept to G2 without delay.

10. Elements isolated behind enemy lines.

a. Using methods prescribed in Anx B, rept loc, str, aval comm eqp, maps aval, and status of sup to parent HQ.

b. If designated as a stay-behind force, switch to frequency designated in SOI.

C. Procedures.

1. Fire support coordination. See Anx A, Fire Support Coordination.

2. Security. Div G3 coordinates def against en ground, air, and abn atk. Ea unit resp for local sec. G3 supervises rear area security. G4 supervises area damage control. Div trains comdr coordinates and executes rear area security and area damage control plans, and has area responsibility between BG rear boundaries and div rear boundary as defined. Additional sec for protection of div nuclear delivery units to be prov as required; requests to G3.

3. Development of the situation. Units intensify recon and then clear resistance within cpbls. Recon and sec elm habitually loc obstacle bypasses for hv veh.

4. Tactical operations.

a. Contact maint left to right, from supporting to supported units.

b. Tac air spt. Requests for preplanned mission submitted to div G3 air by 1400 daily.

c. Unit progress. After contact with en, units rept hourly loc of elm; or upon reaching asg obj or crossing designated phase line or check pt.

d. Nuclear safety lines (NSL) and indiv protective and other restrictive meas in relation thereto are estb in the coordination instructions of the OPORD.

e. Engr. Rept immed to div engr loc of own and en minefields and prepositioned nuclear wpn.

f. CB. See Anx F, Chemical, Biological and Radiological Warfare for defensive measures. Offensive use only on order of div comdr.

g. Smoke. See Anx A, Fire Support Coordination.

h. Defense against air atk.

(1) Acft fired on only when hostile markings are plainly visible or when acft commits hostile act.

(2) Attached ADA wpn and specifically designated organic weapons furnish AD protection. In event of air atk, veh disperse to extent practicable.

i. Bomb and shell disposal. Units mark loc dud shells and bombs and rept loc to div ord off in six number coordinates. Use flash msg rept for suspected dud nuclear wpn. Estb safety precautions.

j. Actions to Minimize Effects of En Nuclear Chemical and Biological Atk. Anx C.

k. Risk criteria. Unless otherwise directed by div CG, nuclear troop safety will be negligible risk for warned, exposed troops.

D. Techniques.

1. Orders.

a. Fragmentary orders normal during op. Max use of overlays, tables, and charts. Written orders when time permits and for record.

b. Nuclear fires will be planned and detailed tgt analysis will be prep in div FSCC, based on applicable portions of corps plans, wpn allocated to div, and instructions from div G3. Nec info will be incl in aprop anx to plans and orders (fire spt, air spt, barrier, etc.)

c. Warning order to own trp for friendly nuclear and cml atk:

(1) Time of atk for—

(a) Scheduled fires will be disem in the aprop fire plan.

(b) On-call fires and fires on tgt of opportunity will be disem by fragmentary order through comd channels.

(2) Safety precautions for—

(a) Scheduled and on-call fires will be disem in div OPORD (par. 3__, Coord Instr).

(Classification)

(b) Fires on tgt of opportunity will be disem by fragmentary order through comd channels.

(3) Postponement of nuclear and cml atk. Transmit in clear by fastest comm means aval the msg QUOTE TARRY, TGT NO. __, INSTR LATER UNQUOTE fol by transmission of aprop instructions.

2. Reports. The fol rept will be submitted by maj comd and sep units:

a. Intel. (par. IIB.)

Rept	How submitted	Time
Flash msg rept, all types.	By expeditious means	At once
BOMREP, SHELREP, and MORTREP.	Radio, radioteletypewriter, or telephone.	At once
ISUM	Radio, radioteletypewriter, or msgr.	As of 0600, 1200, 1800, and 2400 daily.
Radioactive contamination and toxic.	By expeditious means	At once
b. Op.		
Unit progress rpt	By expeditious means	See par. IIC4c
Loss of contact with friendly units.	By expeditious means	At once
Sitrep	Message form	Maj comd, sep task force, sep unit, as of 1800 daily; reach div HQ by 2200 daily.
Comd rept (to incl intel, op, log, and pers).	Formal written rept	Maj comd, bn, sep units, as of 2400 end of ea mo by 5th of fol mo.

E. Special considerations.

1. Actions to minimize effects of nuclear attack. See Anx C, w/app 1, 2, and 3. Actions To Minimize Effects of Enemy Nuclear Chemical and Biological Attack.

(Classification)

2. Fallout, radiological monitoring, and survey. See Annex D, Prediction of Fallout, Radiological Monitoring, and Survey.

3. Army aviation. See Anx E, Army Aviation.

4. Chemical and biological warfare. See Anx F, Chemical, Biological and Radiological Warfare.

5. Mobility.

a. March org. Div moves in march colm (multiple routes when aval) preceded by recom elm; normally in 7 march serials; 5 BG, div trp, and div tn. Maximum use of darkness.

b. Control. March serials provide own sec. Prior recon (routes, and div and assy areas); traffic con; guides; and posting and removing route markers are resp of serial comdr, supplemented (for main routes) and coordinated by div. Rept hourly by loc of heads of march serials. (Anx B, Methods for Rept Loc of Units.)

c. Priority. Nuclear delivery units, tac trp mov, ambulance, ammo veh, tech svc construction crews, staff cars, and messenger veh.

d. Density and rate.

(1) Night. Close colm. 75 veh per mile at average speed 10 MPH. Maximum speed 15 MPH.

(2) Daylight. Open colm. 20 veh per mile at average speed 15 MPH. Max speed: wheel, 25 MPH, track 20 MPH.

(3) Infiltration. Irregular dispatch, 3 veh per mile at 12 to 20 MPH.

(4) March unit. Co size unit. Time between march units, 5 min; between serials 15 min.

e. Halts. 15 min after each 1¾ hours of march (1 hr 45 min). Keep road clear. Comdr detm cause of all unscheduled halts and take aprop action. Refueling halts are prescribed. Crews make maint check. Disabled veh display yellow flags.

f. Lights. Blackout forward of army light line. Use of infrared auth unless prohibited by div order.

g. Passing. Only when colm is halted, except con, recon, gen off, msgr, med veh, and veh displaying red emerg flag. Convoys pass only on permission of halted colm comdr.

h. Veh marking. Lead veh of serial carry blue flag. Rear veh in serial carry green flag.

i. Accidents. Off at tail of each march unit investigate and take nec action.

j. Guards. Air guards in all veh. Traffic guards will be posted at head and tail of ea halted march unit.

6. Barriers. Responsibility for preparation announced in OPORD. Responsible units submit barrier plan, overlays and schedules to G3. Minefields rept on DA Form 1355 (4 copies) to Engr.

III. COORDINATION OF ADMINISTRATIVE SUPPORT OPERATIONS

A. Coordinating Agency. Division logistics control center (DLCC).

1. DLCC regulates and expedites the current logistical support activities of the division, regulates and controls traffic in the division area, formulates administrative orders and instructions, and plans and executes rear area security and area damage control measures.

2. Div tn comdr is div logistical controller and as such is the officer in charge of the DLCC; he is responsible for the admin spt for DLCC. DLCC includes representatives from G4, div surg, div ammo off, trans bn, div QM and other staff sections as required; normally the HQ will be at the DLCC. Div trans off determines composition of tfc HQ.

3. DLCC located in vicinity of div tns HQ.

4. DLCC prepares detailed operating procedures. Report receiving agencies maintain current information at DLCC by direct communication and liaison.

B. Techniques. Fol rept will be submitted by bn and sep co:

1. Log:

Special log rept	Radio, radioteletype-writer, or telephone.	When called for as of 1800 by 2200 to G4.

Cmbt veh status rept.	Radio, radioteletype-writer, or telephone.	Daily, as of 1800 by 2200 to G4.
2. Personnel:		
Pers daily summary.	Radio, radioteletype-writer, or telephone.	Daily, as of 1800 by 2200 to G1.
Casualty rept	Formal written report	Daily, as of 1800 by 2400 to div AG.

(In missing and missing-in-action cases, unit comdr will suspend forwarding of rept for a period of 6 days, during which time all possible sources of info will be checked to verify that the indiv is actually missing.)

C. Detailed Considerations.

1. Logistics.

a. Coord through DLCC. See paragraph IIIA.

b. Material and services.

(1) Supply.

(a) General. Unit distr of cl I, II, III and IV by div tech svc to unit tns area. Sup of cl V by sup pt distr.

(b) Cl I. Res 1 ration, small det, in div QM; 3 rations indiv combt for occupant in ea veh. Supper ration cycle.

(c) Cl II and IV. Units requisition through div tech svc of staff off concerned. Tech svc detm and maint limited stocks of fast-moving items. Direct exchange items from supporting div tech svc element. Requisitions for items in excess of alws and regulated or critical items through comd channels.

(d) Cl III. Issued on basis of empty tk trk, or can for can. QM atch tk trks to units as appropriate. Ea wheeled veh carry min res of 10 gal; except ¼-ton trk, 5 gal. Indiv veh refuel at any supp pt on route. Units submit daily status rept to div QM by 1400 daily.

(e) Cl V. Units maint basic loads. Replace expenditures from ASP, or div cl V distr pt when authorized, on ammo request signed by DAO.

Flame fuel mixing and service equipment operated by cml off. Separate ammunition requisition for nuclear weapons cleared through DAO; firing unit provides trans and security. Request for authority to exceed ASR to G4. Request for authority to stockpile ammunition in excess of basic load to G4, 24 hours prior to pickup time; request to be accompanied by ammunition requisition for quantity in excess of basic load.

(f) Water. All water except that secured from engr water sup pt considered contaminated. Water purification tablets will be issued to indiv.

(g) Salvage. Unit comdr are resp for coll. QM evac from subord units.

(h) Captured materiel. See paragraph IIIB3.

(i) Cannibalization. Maintenance units cannibalize in accordance with AR 750–50.

(2) Transportation.

(a) Dispatch of six or more veh rear ward of div tn area requires clearance from div hwy traffic HQ.

(b) Requests for additional transportation to specify number of persons or tonnage.

(c) Units prepare to dump loads in bivouac areas on 30 minutes notice. Sup by air. Requests for sup by air to DLCC, giving amount and ident of sup required, loc and description of primary and alternate DZ or LZ; date, time, and method of delivery (air-landed, airdrop, parachute); DZ or LZ ident, summary of en sit vic of DZ or LZ; loc of forward dispositions, and SOI data.

(3) Services.

(a) General. Rept loc of log instl and unit tns to DLCC.

(b) Decon. Decon of areas, supplies, and eqp in a nuclear atk will be limited to those essential to op.

(c) Maintenance.

1. Ord. Unit comdr resp for evac to axis of area of ord veh coll pt. Div ord off asst on request. Spt by platoons of fwd spt co includes all troops in immed vic of sptd BG.

2. Sig. Tag sig eqp for rep with unit designation and nature of trouble and notify nearest sign-cen. Mobile sig rep teams will rep eqp on site or exchange as aprop.
3. Engr. Rept items of engr eqp requiring field or depot maint direct to div engr bn.
4. Cml. QM and trans through respective tech svc.

c. Medical evacuation and hospitalization.
(1) Med bn evac unit aid sta rept loc of aid sta and march collection posts to div surg.
(2) Req for air evac through med off DLCC or to div surg by most expeditious means.

2. Personnel.

a. Strengths. See paragraph IIIB2. Immediately following enemy nuclear or chemical attack on unit (plat and higher), the senior member of each unit will estimate casualties and submit a rept through command channels by most rapid means available. As soon as possible thereafter, the senior member present will rept through command channels by most rapid means effective strength and loss of comdrs.

b. Replacements. Req submitted daily to AG as of 1800 by 2200. Upon request of BG, bn, and sq comdrs, AG assigns repl direct to co. Units receive replacements at replacement sec, admin co, on notification by AG. Requisitions for repl units (plat and co) to CI.

c. Discipline, law and order.
(1) Pers awaiting trial, except those requiring physical restraint, remain with their units while in cmbt.
(2) MP plat or det in div area operate under PM.
(3) In occupied areas, MP have auth and jurisdiction and are empowered to enforce laws and regulations and make arrests within div area without regard to nationality, svc, or civ status; and to deputize any US mil pers to assist them.

d. Prisoners of war and civilian internees.
(1) POW evac by capturing BG, bn, or sq to nearest div coll pt or coll pt of fol and spt units.

(2) Wounded POW evac through med channels.
(3) PM op div coll pt under div con.

e. Graves registration service.
(1) Comdr of all ech resp for coll, ident, and evac US, Allied, and en dead to graves registration coll pt. Mass burials only on instructions from div HQ.
(2) One coll and evac sec of the QM co spt ea BG, one spt Div ( ).
(3) Isolated burials only when unavoidable. Rept loc graves to div QM.
(4) Pers effects on body remain with deceased until arrival at cem.
(5) Units properly ident and forward pers effects found in area to div QM without delay.
(6) Indigenous civ dead interred by local civ in accordance with local customs.

f. Civilian pers. When auth to employ local civ labor, requisition will be submitted to this HQ.

g. Morale and pers services.
(1) Leave and div rest camp quotas will be filled.
(2) Decorations and awards.
(a) No quotas.
(b) Recommendations submitted by any person having knowledge of action of any other person. Time for processing kept at absolute min.
(c) All recommendations to div review board through channels.
(d) Presentation without delay at aprop trp formation, which when practicable, incl associates and eyewitnesses.
(3) Unit mail delivery with cl I sup (unit distr).
(4) Unit comdr arrange with pers off for payment of trp, soldiers' deposits, and savings bonds.
(5) Army Exchange items distr with cl I sup.
(6) Sp svc. Priority to cmbt trp.

h. Pers procedures. Pers receiving battlefield commissions will normally be assigned to own unit and may be assigned to own co. Recommendations for commissions (other than battlefield) or promotion, when vacancy exists to div HQ.

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3. Civil Affairs (CA).
   a. General. G5 will expedite civ relief sup in locality affected by nuclear atk.
   b. Civilian facilities. Civ relief fac will be utilized to max.
   c. Traffic control. PM will restrict civ mov into or out of locality affected by nuclear atk to min essential.
   d. Internal affairs and government.
      (1) Div retains resp for all CA activities in area except those specifically delegated to subor units.
      (2) Units evac arrested civ to div POW coll pt. Keep separated from POW.
   e. Civil affairs units. CA units for designated communities called forward when capture of community is imminent.
   f. Resources. Safeguard public works, until. fuel, and oil storage, or sup installations.
   g. Logistical support.
      (1) Max use of civ resources for civ relief, camps, control, and health.
      (2) Min mil spt for civ relief upon approval this HQ.
   h. Reports. Units immed rept to G5 capture of key civ officials, national treasuries, and stores of sup.

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Annexes: A—Fire Support Coordination
B—Methods of Reporting Location of Units
C—Actions to Minimize Effects of Enemy Nuclear Attack.
D—Prediction of Fallout, Radiological Monitoring, and Survey.
E—Army Aviation
F—Chemical and Biological Warfare
G—Rear Area Security
H—Signal

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Annex A (Fire Support Coordination) to SOP _____.

1. FIRE SUPPORT COORDINATION CENTER

a. Composition. FSC (CG, div arty, or designated representative); G3 air; G2 air; AIRLO; op and intel representatives, div arty, naval gunfire officer (NGFO) (Army) and asst NGFO (Navy), if aprop; LOs from fire spt agcy as required.

b. Loc, normally vic G2–G3, main CP.

2. TARGET NUMBERING SYSTEM

a. Div Prefix. The ltr "A" is asg co 20th Inf Div, as a ident prefix, for all tgt designated by div agcy.

b. Unit prefixes. The fol ltr prefixes are asg to fire spt agencies. The originating unit or agcy will asg a nr to each tgt, preceded by the two-ltr prefix "D" and the unit's ident ltr. (Exceptions see en mort and arty loc below.)

A, B, C, D, E_____1/45 Arty, 2/45 Arty, 3/45 Arty, 4/45 Arty (SP), 5/45 Arty (SP), respectively.
F_____1/46 Arty.
G_____20th Inf Div Arty.
H_____Air.
J_____NGF.
K_____Div FSCC.
L, M, N, etc_____Atch units. Assigned by div FSCC on atch.

(Example: Tgt 101 designated by 2/45 Arty, AB 101).

c. En arty and mort loc.

(1) En arty loc are asg a two-ltr designation by corps arty; confirmed loc will be fol by suffix "C."

(2) En mort loc are asg a two-ltr designation, preceded by the ltr "M," asg by div arty. Confirmed loc will be fol by suffix "C."

d. Groups of arty concentrations. Originating unit asg a nr, preceded by div prefix (D) and fol by originating unit's ident ltr. (Example: Third gp of concentration originated by 3/45 Arty: A3C.)

3. SAFETY

a. Air safety. Planned restrictions on use of spt arms during air strikes effected and suspended by div FSCC. Orders transmitted through fire spt channels.

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b. Ground safety.

(1) No fire line.

(a) Reinf and GS arty or naval gunfire execute fire msn short of no fire line only after clearance by DS arty of spt unit.

(b) When used, loc is estb by DS arty bn comdr in coord w/comdr(s) of spt unit(s).

(2) Bomb line.

(a) Nuclear air strikes, short of nuclear BL only when cleared through div HQ and approved by higher HQ.

(b) Nonnuclear air strike short of nonnuclear BL only when coord by div FSCC. FSC will specify whether AF con (vis or electronic) is desired.

(c) Establishment and change.

1. System A. Based upon recommendations of subor units (BG or TF level). Recommendations for BL loc or changes in loc direct to G3 air.

2. System B. Units send posit reports giving loc of leading troops and forecast future movement in code over air request net.

3. G3 air announced over air request net whether system A or system B is in effect.

4. Changes in BL disem by G3 over air request net.

(3) Nuclear safety line. Established by FSCC. Location and instructions in fire spt plan and OPORD.

(4) Risk criteria. Unless otherwise directed by Div CG, troop safety will be negligible risk for warned, exposed troops.

4. OBSERVATION.

a. 0–0 line. Div. arty comdr resp for requests to corps for changes as required.

b. Responsibility. DS bn resp for obsn in zone of spt unit; GS and spt units obsn as dir by div arty comdr; reinf units obsn as requested by reinforced unit.

5. TACTICAL AIR SUPPORT

a. G2 air or G3 air is resp for informing requesting unit of final action taken on recon or offensive air spt requests, respectively.

b. Forward air controllers. Briefing at div FSCC and subordinate unit. Disposition by AIRLO coord with G3 air and div FSC.

6. NAVAL SUPPORT

a. Naval gunfire will be fired by DS ship of the ech concerned, using naval gunfire procedures. If additional naval gunfire spt is required, it will be requested from next higher FSCC through naval gunfire channels.

b. Shore fire control parties will con and adjust naval gunfire; adjustment of naval gunfire by arty FO in emerg only.

c. Admin spt of naval parties by units to which atch.

d. If air naval gunfire liaison company (ANGLICO) atch, ANGLICO channels through unit FSCC will be empl for naval gunfire and con of naval air.

e. Div arty survey sec resp for nec survey of naval gunfire radar beacon.

7. AIR DEFENSE ARTILLERY

a. FSCC resp for restricting spt fires to ensure safety of aircraft. Div avn off coord flt of div acft with FSCC.

b. G3 air and G2 air will inform atch ADA LO of all known air spt or recon msn in div zone.

8. ARMY AVIATION

a. One acft in air constantly in div zone or sector on obsn or combat surveillance when flying conditions permit, coord by div avn off.

b. Unit request for msn acft dir to div avn off when under centralized con.

9. SMOKE

a. All smoke msn approved through unit to div FSCC.

b. Coord use with adjacent units.

10. BATTLEFIELD ILLUMINATION

a. Requests for battlefield illumination will be proc through unit. Requests must be approved by div FSCC except as indicated below.

(1) No restrictions on illumination by organic wpn of cmbt unit.

(2) Emerg illumination by arty on auth DS arty bn comdr. Notification to div FSCC by fastest means.

b. Decentralization con of slt and acft for battlefield illumination on div order only.

11. COMMUNICATIONS

a. Requests for nuclear fires from maj comd through comd comm channels to div HQ.

b. Normal comm nets for immed air requests will be used in fol priority:

(1) Div air request net.

(2) Wire or rad from arty LO through comd channels to div FSCC.

(3) Other wire or radio.

(4) Tac air dir net in emerg only.

c. Immed requests sent by elec means over nets must be preceded by the words quote IMMEDIATE AIR REQ unquote. Msg thus sent takes priority over all other msg.

d. Cmbt units down to and incl bn and sq HQ will enter sta in div req net, utilizing organic eqp; net frequency to be announced; call signs in SOI.

e. All en active ECM will be rept by most expeditious means to div FSCC and to div sig off.

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Annex B (Methods of Reporting Location of Units) to SOP____.

1. GENERAL

Standard method, normal use. Altn methods, as dir or in emerg.

2. TIME OF REPORTS

Hourly or as control (check) pt are reached.

3. STANDARD METHOD

Control (check) pt rept. Procedure similar whether control (check) pt loc on routes of march, on PL, or gen throughout area.

a. On a map or overlay of div zone, terrain features having distinguishable features recognized on the ground (towns, RJ, stream junctions, hilltops, etc) are inclosed in small circles and numbered consecutively 1, 2, etc. Area covered will normally extend at least 4,000 yd beyond div obj.

b. Rept by giving (code for unit) loc or distance and dir from control (check) pt and dir of mov.

c. Overlay showing new numbered control (check) pt will be issued by G3 ea time a complete OPORD is issued, or more frequently as dir.

d. BG, sep bns and div arty, issued blocks of numbers for selection of add control (check) pt within their zones for subor units.

4. ALTERNATE METHODS

a. Coded map coordinates. Numerical coordinates are encoded to ltr using a code-prep by div sig off. (See div SOI.)

b. Terrain code name. Similar to standard control (check) pt method, except that code names instead of numbers are used to designate terrain features.

c. Ten square grid map code. See FM 24–16.

d. Thrust line map code. See FM 24–16 and FM 21–26.

5. SECURITY

a. If standard control (check) pt overlay compromised, take fol action:

(1) Rept to G2 w/o delay.

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(2) G3 will dir one or more of fol be adopted:

(a) Prearranged nr be added to or subtracted from nr on control (check) pt overlay.

(b) Issue new control (check) pt overlay with control (check) pt renumbered.

(c) Use one of altn methods.

b. If one of altn methods comprised, rept fact to G2, and G3 will dir the issue of new code names of ref pt, as applicable, or dir use of one of other methods.

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Annex C (Actions To Minimize Effects of Enemy Nuclear, Chemical and Biological Attack) to SOP NO._____.

1. GENERAL

a. This anx prescribes normal procedures for def against and actions fol en nuclear atk.

b. Subor unit SOP will conform.

c. See Annex F (Chemical, Biological and Radiological Warfare) for procedures peculiar to CB warfare.

2. PLANNING

a. Org and designate pers for control and assessment team (CAT) (app 1).

b. Org and designate pers for rescue, labor, and decontamination squads (app 2).

c. Orders.

(1) Comdr concept habitually in sufficient detail to permit continued, and when nec, independent action by subor units.

(2) Div designates emerg assy areas and/or altn pos within zone or sector. Use only on div order. Subor HQ designates rallying pt.

d. Offense.

(1) Predict own disposition at critical stages of offense.

(2) Assume en nuclear or CB atk against predicted disposition at pt of max vulnerability.

(3) Eval effect on own trp.

(4) Detm actions to offset effect on en atk to cont msn. Prep contingency plans to incl essential draft OPORD and checklist of actions to be taken in chronological order.

e. Defense.

(1) Detm max vulnerability of own dispositions.

(2) Assume en nuclear atk in areas of max vulnerability.

(3) Est damage to own trp and effect on def plan.

(4) Detm actions nec to offset effect of en nuclear of CB atk and incorporate, as approp, in catk plans.

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f. Fallout. Plan for fallout (concurrently with b, c, d, above).
(1) Assume en surface bursts against own predicted dispositions at various pd in op.
(2) Eval effect on trp and oplan.
(3) Detm action nec to offset effect of en nuclear atk to incl—
(a) Warning order.
1. Loc of GZ, time of burst.
2. Probable fallout area and arrival times.
3. Immed action to be taken.
(b) Decon plan.
(c) Displacement plan.
(d) Fallout survey plan.
(e) Unit monitoring plan.

3. OPERATIONS
a. General.
(1) Priority of tasks. Subsequent to en nuclear or CB atk. Prim tasks are—
(a) Cont msn.
(b) Reestablish comd and comm and implement monitoring plan if en wpn was a surface burst.
(c) Detm and rept remaining combt effect of damaged unit(s), comd, and comm.
(d) Reorg damaged units.
(2) Alternate plans. BG, bn and sq prep and keep current altn tac plans, incl displacement and decon plans. Coord these plans with higher, lower, and adjacent HQ.
(3) Passive protective meas.
(a) Units habitually disperse, and dig in all pers, to incl overhead cover when permitted by sit. Max pers remain in, or in vic, of armed veh consistent with essential op.
(b) Construct protective shelters for personnel and command installations in stabilized defensive positions.
(c) Make max use of armed veh.
(d) Fol nuclear burst, max protection, await further orders.
(4) Mov. Units made max use of night mov, multiple routes of march, and dispersion.

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(5) Dispersion. Maximum consistant with assigned mission and existing situation.

(6) Cam and deception meas.

Enforce cam discipline and use of natural concealment at all ech. Coord deceptive meas, incl dummy instl, with div plans.

(7) CAT. CAT dispatched to areas of tactical and tactical support units following a nuclear detonation and when communication with these units is lost upon instructions from div G3 Section. CAT dispatched to areas of administrative support unit upon instructions from div trains commander.

b. Actions immediately fol nuclear atk (automatically without orders).

(1) Indiv and cmbt veh crews. Estab contact with superior.

(2) Units.

(a) Turn on radiac instruments and start continuous monitoring.

(b) Rept to next higher HQ elm out of contact.

(c) Reestablish comm with subor elm.

(d) Protective meas.

1. Immed max protection.
2. Prep for early mov.
3. Displace as nec to avoid radiation hazard and cont msn.

(e) Avoid entry into area when predicted dose rate to pers equals or is greater than _____ r/hr at time of entry. Prevent cumulative dose over _____ r/day or _____ r/wk. (Figures to be developed from guidance provided by higher headquarters.)

(f) Flash rept info relative to nuclear blast to incl—

ALFA (time of burst).

BRAVO (loc of observer).

CHARLIE (magnetic azimuth from observer to mushroom cloud).

DELTA (est GZ).

ECHO (est height of burst in meters).

FOXTROT (est yield; small, medium or large)
GOLF (observed effects).

(g) Fol with OPERATIONAL IMMEDIATE msg, giving all aval details.

(h) All units rept initial time of arrival and intensity of fallout in area. Thereafter, rept as dir to CBRC.

(3) Div HQ, div arty, div trains, BG, bn and sq.

(a) When required, dispatch CAT and rept action.

(b) Rept atch acft immed aval for recon.

(c) Prep to release attached elements of tk and cav sq and uncommitted companies.

(4) Uncommitted units. Prep for immed mov.

(5) 1/21 Cav. If not committed, provide one plat with monitoring eqp aval for immed mov.

(6) Div avn co.

(a) Dispatch acft to survey and monitor burst area and to obsr en.

(b) Flash rept. (Par. 3b(2)(f).)

(c) Hold one hel at div airstrip.

c. Battlefield decon. See TM 3-220.

4. LOGISTICS

a. Support. Units op in damaged areas obtain required sup from nearest aval source.

b. Evacuation and hospitalization.

(1) Affected units accomplish max self-aid.

(2) Nonmed pers will asst in routine med care and evac only on div order.

c. Transportation.

(1) Incl altn means of trans, unit, and route priorities in all pertinent plans.

(2) Only veh engaged in, or supporting area damage con activities or engaged in tac operations enter damaged area.

(3) Div MP det prep to reinf present TCP an destb add TCP, utilizing organic MP or other units as dir.

d. Services.

(1) Decon limited to that essential to op.

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(2) Priorities for repair and/or reconst.
(a) Sig command trans facilities.
(b) Med facilities.
(c) Sup and veh maint facilities.
(3) Priority for engr decon employment.
(a) Comd and comm instl.
(b) Routes.
(c) Log incl med instl.
(d) Tac areas.

e. Miscellaneous Comdr or senior surviving off resp for damage con op in own area.

5. PERSONNEL

a. Strengths. As soon as practicable, unit or CAT comdr forward fol:

(1) Number and type of cas.
(2) Effective str of affected units.
(3) Loss of comdr, if applicable.

b. Replacements. Repl sec, admin co, insure that all incoming pers are familiar with current doctrine and procedures for survival under conditions of nuclear warfare.

c. Discipline, law and order. Div MP det—

(1) Prep to estb MP patrols rear of affected units, utilizing organic MP or other units as dir.
(2) Prep to asst in establishment of emerg refugee coll pt on div order.

d. Graves registration. Mass burial only on order this HQ.

6. CIVIL AFFAIRS

a. Dev and maint current plans for con of civ population in event en nuclear or CB atk.

b. Plan to estb emerg refugee coll pt. Execute only on div order.

c. Recommend measures to be taken by civil defense.

7. COMMAND

a. All units within div area may be asg to damage con msn. Tactical and tactical spt units on div order only. Admin units on order div train commander.

b. Allowable doses—as announced by higher HQ.

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Appendixes: 1—Control and Assessment Team (CAT)
2—Rescue, Labor, and Decontamination Squads
3—Damage Control in the Division Rear Area

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1 Sep 19____

Appendix 1 (Control and Assessment Teams) (CAT) to Annex C (Actions to Minimize Effects of Enemy Nuclear, Chemical and Biological Attack) to SOP NO._____.

1. MISSION

Reestablish mil con over elm hit by en nuclear or CB atk. This is accomplished by—

a. Reestablishing comd and comm.

b. Assessment of damage to unit.

c. Rehabilitation of unit to cont msn.

2. ORGANIZATION

Div HQ, div arty, BG, div tn, sq and bn form at least one CAT as fol:

a. Senior off—comdr. (May be tech svc off in div tn area otherwise must be of an arm.)

b. Medical representative. (when aval)—coord med air and evac.)

c. Sup representative—detm extent of sup required.

d. Engr representative (when aval)—determine engr effort required.

e. Radiological monitoring team—initial determination of extent of residual contamination.

f. Comm det—capable of repl minimum comm at next lower ech.

g. Sec elm—capable of securing CAT.

h. Trans (incl aval air)—capable of lifting CAT.

i. PM representative (when aval)—tfc con in affected area.

j. Cml representative (when aval)—initial determination nature and extent of cml contamination.

3. DUTIES

In priority—

a. Mov to damaged area without delay.

b. Determine and rept remaining cmbt effectiveness of damaged unit.

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c. In nec, assume con of damaged units to restore comd and comm.

d. Take action to resume unit's msn as soon as possible.

e. Request med, engr, avn, and QM graves registration asst required.

f. As soon as practicable, rept fol:

(1) Number and type of cas.

(2) Effective str of damaged units.

(3) Loss of comdr (or ldr), if applicable.

(4) Location of CAT CP.

g. Rept (loc, dose rate, time of reading) all radiation areas over 1 r/hr and cml contamination discovered in course of operation.

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App 2 (Rescue, Labor, and Decontamination Squads) to Annex C (Action to Minimize Effects of Nuclear Chemical and Biological Attacks) to SOP NO._____.

1. LIGHT RESCUE SQUADS

a. Ea co, btry, or similar unit, except units furnishing hv rescue sqd or labor sqd, will org and have aval for use 1 lt rescue sq consisting of at least 1 NCO or specialist and 6 EM. Functions of sqd include rescue of cas (when removal does not involve use of hv eqp), and administration of first aid when nec. Med items required to be furnished by med bn.

b. Eqp for ea lt rescue sq will include—
(1) 2 trk, ½-ton; or 1 trk ¾-ton.
(2) 1 pick.
(3) 2 shovels.
(4) 2 axes.
(5) 2 cutters, wire.

c. Sqd will be used when nec or as dir for rescue work. Rescue sqd formed by tac units will normally be only for local use by comdr thereof.

2. HEAVY RESCUE SQUADS

a. Ord bn and engr bn will org and have aval one hv rescue sq per co. Sqd will consist of at least 1 off and 12 EM. Ea sqd may be augmented as determined by unit comdr in consideration of unit eqp and pers aval and work to be performed.

b. Function of hv rescue sqd includes extrication of trapped cas involving hv loads and salv of mat in damaged areas. Eqp for hv rescue sqd should include following items when prov in TOE:
(1) 1 trk, 2½-ton, and trailer, 1½-ton.
(2) 2 bars, pry.
(3) 1 differential chain hoist, 1½-ton or 3-ton.
(4) 2 snatch blocks for 1-in manila rope.
(5) 2 hacksaws.
(6) 2 cold chisels.
(7) Manila rope, 1-in, 300 ft.

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(8) 2 hydraulic jacks.
(9) 1 acetylene welding and cutting equipment.
(10) 2 hooks, grappling.
(11) 4 road flares.
(12) 4 crowbars.
(13) 1 cross-cut saw.
(14) 2 picks.
(15) 4 shovels.
(16) 2 sledges.
(17) 2 hatchets.
(18) portable lights—as nec and aval.
(19) 4 flashlights.
(20) 4 pr rubber gloves.
(21) 2 buckets.
(22) 2 wire cutters.
(23) 1 trk, wrecker.
(24) 1 bulldozer.

3. LABOR SQUADS

a. Div tn and admin co, will org 1 labor sqd ea consisting of at least 1 off and 20 EM. Ea sqd will have two 2½-ton trk and other eqp to include first aid eqp and other items as prescribed.

b. Labor sqd perform tasks which do not require specialized tng or eqp. Such tasks include clr debris by hand, search for cas, eac of cas, salv of mat and decon. Labor sqd may augment MPs, or remove mil sup from areas endangered by fire. Unexploded bombs and other dangerous mat will normally be removed under tech supervision.

4. DECONTAMINATION SQUADS

a. Ea co, btry, or similar unit will train, and have aval, an emerg decon sq consisting of at least 1 NCO or specialist and 9 EM. Functions of sq include emerg decon of rescue pers and eqp which may become contaminated from radiation or CB effects during conduct of op.

b. Eqp and sup for emerg decon sq should include fol items. Eqp and sup, if not organic, will be furnished as required.

(1) Shovels.
(2) Radiation detection instruments (survey meter and personnel monitoring instrument).
(3) Cml agent detection kit.

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(4) Brushes, scrubbing.
(5) 2 pr gloves, rubber.
(6) 2 cans, corrugated, 16–32 gallon.
(7) 4 ea DANC solution unit, 3 gallon, M–4.
(8) Bandage scissors.
(9) Ten ea protective fld mask with component protection kit, M5A1.
(10) 1 rake.
(11) 4 brooms.
(12) Rags, 20 pounds.
(13) 2 buckets, 14 qt.
(14) 1 heater, immersion type.
(15) 1 ax, single bit.
(16) 4 ea decon agent, STB, 50-pound can.
(17) Soap, issue, 5 pounds.
(18) Leather dressing, vesicant gas resistant, M-2, 10 cans.

c. Sq will be utilized when nec or as dir to assist in recov work.

5. MEDICAL TEAMS

a. Pers
1 MC off
4 Sr aid men
4 litter bearers
3 amb orderlies
1 lt trk dvr
4 aid men
5 amb dvr

b. Eqp
1 ¼-T trk w/radio
5 ¾-T amb
First aid eqp
Med eqp and sup
Material for limited CBR decontamination.

c. Med bn be prep to dispatch 3 med teams on 30-min notice.

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Appendix 3 (Area Damage Control) to Annex C (Action To Minimize Effects of En Nuclear Chemical and Biological Attacks) to SOP NO._____.

1. APPLICATION

a. The provisions of this app will apply to all units and instls within the div rear area except as modified by current area dam con and operation plans.

b. Aprop area dam con meas will be as prescribed by sep units for requirement for their respective areas and will be coord with div tn comd. Passive def meas will be habitually empl. Mutual assistance between units in div rear area in the conduct of area dam con will be limited only by the requirement of the tac sit.

2. GENERAL

Div tn comd is resp for dam con in div rear area under GS supv of G4. Each instl and unit comd prep area dam con plans to min the eff of dam occurring with the instl or unit area. Each instl furn dam con teams or spt to other units within the div rear area as dir by the div tn comd in acd with overall plan. The div tn comd supv and coord the execution of area dam con plans.

3. RESPONSIBILITIES

a. Div G4 is resp for GS supv of dam con in div rear area. He coord overall plan and its impl with G3 (incl planned mov of units within div rear area) and with G5.

b. Div tn comd is resp for—

(1) Prep of area dam con plans. Plans incl prov for:

(a) Sig comm.

(b) Tn and eqp labor, rescue, and decon sqd by units with div svc area, incl specific instr on where and when sqd rept when plan is impl.

(c) Empl of area dam con pers including those from other units or instl in the div rear area.

(d) Emergency food, clo, and water.

(e) First aid and evac of patients.

(f) Con measures to prohibit nonessential mov and prov

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for rerouting of tfc to restrict access into dam con area except essential dam con pers and units.

(g) Instr to survey, mark, and report all contaminated areas, utilizing CB trained pers from local units.

(h) Be prep to assist other affected areas when directed.

(2) Supv and coord of dam con when the area dam con plan is impl.

(3) Empl of dam con units incl their mov wi the div rear area, when the area dam con plan is in eff.

(4) Log spt in coord with G4 for area dam con.

(5) Detm manpower and mat needed for area dam con purposes.

(6) Asst to be prov by or to non-div units loc within div svc area.

4. MEDICAL EVACUATION AND HOSPITALIZATION

Div tn comd will coord with div surg for med svc and evac nec for dam con in the rear area.

5. SUPPLY

Div tn comd will coord with aprop tech svc units for nec sup for area dam con op and salv op.

6. TRANSPORTATION

a. Traffic control and regulation.

(1) Only veh engaged in or spt area dam con activities, or engaged in tac op within the area, will be permitted to enter and op in the dam area.

(2) Tfc will be con within the dam area by MP units as directed by the trains commander.

b. Requirement for transportation. Req for trans to spt dam con op will be sbm to div tn comd.

7. PERSONNEL

POW confined in div rear area will be prov protection fac and will be oriented as to procedures to be fol in case of nuclear or CB atk.

8. CIVIL AFFAIRS

a. Max util will be made of civ pers, sup, and fac to spt area dam con op. Mil spt of civil def op will be prov only upon div order.

b. CA units loc with div rear area will prov ln between all mil HQ and civil auth and will coord the empl of civ spt for area dam con op.

9. RECORDS AND REPORTS

a. Periodic rept re availability of area dam con squads and other dam con svc will be made by ea org and sep unit as directed by div tn comd.

b. All units or instl moving with div rear area rept departure, estimated time of arrival, and actual time of arrival to div tfc HQ.

c. Pers entering dam area to asst in reestb admin and log spt actv will rept to CAT.

10. SIGNAL COMMUNICATION

Unit FM radio nets aug by area comm system will be util for area dam con.

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/s/ Ray
RAY
G4

(Classification)

20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

Annex D (Prediction of Fallout, Radiological Monitoring, and Survey) to SOP NO._____.

1. APPLICATION

Div SOP applies except as modified by div orders. Subor unit SOPS will conform.

2. REFERENCE

DA TC 101–1. (NOTE: Unit SOP's must reflect the procedures and techniques presecribed in the current version of DA TC 101–1.)

3. ORGANIZATION

No change from current org.

4. DUTIES AND RESPONSIBILITIES

a. General staff.

(1) G2. Supervises the CBRC in dissemination of fallout predictions; dissemination of radiological contamination charts; and planning survey and monitoring operations.

(2) G3. Coordinates with the CBRC concerning planned friendly nuclear atk.

(3) G4. Supv procurement, distr, and maint of radiac instruments.

(4) G5.

(a) Estb procedures and channels for exchange of radiation info with aprop civil agencies.

(b) Estimates local civil def measures and cpbl to conduct radiological monitoring and survey operations.

(c) Supv monitoring and survey operations of local civil def org.

b. Other staff responsibilities.

(1) Fire spt coordinator.

(a) Informs the CBRC of the details of planned nuclear weapons employment in order that the CBRC can prepare and disseminate prestrike and poststrike fallout predictions.

(Classification)

(b) Disseminates meteorological data to CBRC each 2 hours.

(2) Aviation officer.

(a) Conducts training as required to insure all assigned aviators are qualified to fly aerial survey and monitoring missions.

(b) Furnishes aircraft and pilots for aerial survey and monitoring missions as required.

(c) Insures maximum number of authorized survey meters are mounted on aircraft normally used for reconnaissance and observation missions.

(d) Coordinates with CBRC for planning and conducting aerial surveys.

(3) Engineer. Provides personnel and equipment as required for decontamination operations involving use of engineer earth-moving equipment. Coordinates with CBRC regarding radiological contamination associated with employment of ADM.

(4) Signal officer. Procures, distributes, calibrates, and maintains radiac instruments as authorized by current TOE, TD, etc.

(5) Chemical officer.

(a) Operates CBRC.

(b) Plans, directs, and coordinates surveys.

(c) Supervises operations of attached chemical platoon, combat support.

(d) Supervises decontamination operations.

(e) Prepares fallout predictions and disseminates them.

(f) Maintains radiological situation map.

(g) Prepares and disseminates current contamination charts to division staff officers, corps, and subordinate and attached units as required.

(6) Provost marshal. Provides traffic control into, through, and around contaminated areas.

c. Monitoring.

(1) Periodic monitoring. All units of company size or larger will maintain a monitor on duty with the command group on a continuous basis. In company-size units (and smaller units operating independently), the

monitor will make a routine check of the unit area every 12 hours and will check a designated point within the command post area each hour.

(2) Continuous monitoring.

(a) Continuous monitoring will be initiated—

1. On order of unit CO.
2. On order of this HQ.
3. Five minutes before friendly detonations.
4. When a nuclear burst is observed or reported by higher or adjacent units.
5. During all movements and reconnaissance or patrol activity.
6. On receipt of a fallout warning.

(b) During continuous monitoring, all survey meter readings will be made in the same location, except when units are moving or other factors make it impracticable to do so. The monitor will note and report the following information to the next higher headquarters:

1. The location, dose rate, and time of the initial reading of 1 r/hr or higher.
2. The dose rate, location, and time an increase or decrease of 10 r/hr is recorded until the dose rate reaches 50 r/hr and an increase or decrease to 50 r/hr will be reported thereafter.
3. The shielding factor for the shelter or vehicle of the monitor. This shielding factor will be used to compute the outside (unshielded) dose rate.
4. The highest dose rate recorded.
5. Summary reports described in d(4), below.
6. During movements, units will report as in (a) and (b), above.

(c) Continuous monitoring will stop—

1. On instruction from higher HQ.
2. When the dose rate level falls below 1 r/hr (except for units on the move).

d. Reporting procedures.

(1) Initial report. The initial detection of radioactivity will be broadcast over the div warning/broadcast net as a

FLASH message in clear text giving location, dose rate, and time detected.

(2) Subsequent reports. Subsequent reports will be screened and consolidated by div artillery, battle groups, cavalry squadron, tank battalion, engineer battalion, div trains, and brigade HQ (when appropriate). These reports will include the general level of radioactivity in the area, and the location and time detected of highest dose rate in the area. Such reports will be submitted while the dose rate in the area is rising, at the first indication the dose rate is beginning to decline, and thereafter as directed by div. Report by FLASH precedence the time and location when peak dose rate has been reached, when a total dose of 50r has been received in less than 30 minutes, the ending of fallout. Other reports will be as directed by this Hq.

(3) Communications. Reports will be submitted by teletype or voice through the area communications system. Units temporarily out of contact with the area communications center will use the div intelligence net as an alternate means.

(4) Summary reports. Opon direction of the HQ, units will submit a summary report which consists of an overlay showing the radiation situation in the area as compiled from monitoring reports.

e. Training.

(1) Unit commanders will train a minimum of two monitors to operate each organic survey meter. All qualified aerial observers will be trained to perform aerial monitoring and survey duties.

(2) Company sized units will train a control party and a minimum of 2 survey parties for each survey meter authorized.

f. Survey. Surveys will be conducted only when essential radiological information cannot be obtained by monitoring.

(1) Div controlled radiological surveys.

(a) Aerial surveys. During aerial surveys the aircraft flies at the lowest possible constant altitude and

speed along the designated course. Readings are taken at equal time intervals and recorded by the monitor on DA Form 1971-R (aerial). The location, altitude, dose rate, and time of reading will be reported in clear text by radio directly to the CBRC unless otherwise directed. The air-to-ground correlation factor will be determined by the monitor for each survey and included with his initial report.

(b) Ground surveys. Ground survey parties will follow the prescribed survey course and will report the dose rate, location, and time of reading at points designated by the CBRC or the control party. Reading will be taken with the survey meter held approximately 3 feet above the ground. In open areas, readings will be taken at least 30 feet away from buildings or other large structures. In built-up areas readings will be taken in the center of the street or street intersection. Mounted monitors using a survey meter without an external probe will determine the shielding correlation factor and include this factor in the first survey report. Readings will be recorded on DA Form 1971–R (ground). Reports will be submitted as directed by this HQ.

(2) Unit controlled surveys. Units will conduct surveys as outlined in (a) above. Upon completion of the survey, the results will be forwarded to the CBRC.

g. Communications. Command nets will be used within battle group (battalion and comparable units) to report monitoring and survey information. The area communications system will be used by battle group and separate units in reporting to div. Artillery units may also use artillery nets.

5. UNIT ACTIONS

When fallout is initially detected, the unit commander will make an initial report and direct the following action:

a. In bivouac, defensive position, or administrative installations.

(1) Within the limits of his mission, take shelter in prepared positions, existing buildings, inside vehicles, etc. If

no shelter is available, begin construction of hasty field fortifications with overhead cover. Upon movement into an area, the preparation of shelters will be habitual, within limits of the mission.

(2) Movement of subordinate units within the assigned sector or area to take advantage of lower dose rates or better shelter is authorized whenever 50r has been received in 30 minutes or less. Such movement is limited to that necessary to regain communications with this HQ, find effective shelter, or reduce the dose rate to 50r/hr.

b. During offensive action.

(1) If movement is not toward the burst, continue the mission until a company (or major portion of a company) has accumulated 50r in 30 minutes or less, and have affected company take all available shelter and report location to this HQ. In absence of communication with div, have the affected company halt, take shelter, and determine a favorable direction to move. If shelter is not available, movement of affected company is authorized until the dose rates are reduced to 50r/hr. Attempt to continue the advance in an area in which the radioactivity does not exceed 50r/hr.

(2) If movement is obviously toward the burst, continue the advance until dose rate of 50r/hr is detected. Report location to this HQ and take all available shelter. In absence of communications with this HQ, follow the procedure outlined for a company in (1) above.

c. During administrative movements (motorized).

(1) Even if the detonation of a weapon is observed, continue the movement until dose rate of 1r/hr is detected.

(2) At any time a dose rate of 1r/hr is detected, clear the road and halt, taking advantage of available shelter, and send a motorized or mechanized monitoring party forward to survey the route.

(3) Procedures for the monitoring party are as follows:

(a) Proceed until a dose of 20r has been accumulated. If intensities are still rising, the monitor party will return and report the location and situation. Moni-

toring parties will then be dispatched to locate an area of 250 mr/hr or less or a dose rate specified by the HQ. Upon approval of this HQ, the entire column will be moved to that area. Monitoring and reporting as prescribed in paragraph 4c and d will be continued.

(b) If a dose rate of 20r is not received until dose rates begin to decrease, continue until dose rates return to 1r/hr. At this time, halt and wait 5 minutes.

1. If dose rate has not increased to more than 2r/hr return to column and report. On the return trip, observe and record the location of the maximum intensity. Column then continues march and crosses contaminated area as rapidly as possible.
2. If after waiting 5 minutes, dose rate does exceed 2r/hr, continue along route of march until intensity again returns to 1r/hr, then proceed as above.
3. If after 2 such attempts the 1r/hr line is not stabilized for a minimum period of 5 minutes, the monitor will return to the column, and the location and situation will be reported. Monitoring parties will then be dispatched to locate an area of 250 mr/hr or less or an intensity specified by the HQ. Upon approval of this HQ, the column will move to that area. Monitoring and reporting will be continued as prescribed in paragraph 4c and d.

d. Reporting enemy nuclear attacks. When an enemy nuclear attack occurs, all units equipped with aiming circles, transits, theodolites, and/or other optical instruments with similar capabilities, will immediately orient the instruments on the burst. An azimuth reading to the center of the stem will be taken and reported as soon as possible after each detonation. Readings of the elevation to the top of the cloud and azimuths to the edges of the cloud at its widest point will be taken at 10 minutes after detonation. Information outlined on attached "Nuclear Burst Report" will be submitted to the CBRC using the area communication system. (Artillery units may submit this information through artillery channels to the FSCC.)

6. DECONTAMINATION

(See Annex E, Chemical, Biological and Radiological Warfare, and par. 4, App 2, Annex C.)

7. INDIVIDUAL ACTIONS UNDER FALLOUT

Actions that can be taken by individuals to minimize the effects of fallout are outlined below. Individuals will be directed to take such of the following actions as are consistent with the mission of the unit and nature of the action in which the individual is involved.

a. Obtain the following protection in the order listed; remain in the shelter until the area has been determined safe or exit is required for urgent reasons.

(1) Underground shelters.

(2) Foxholes with overhead cover. Foxholes will be continually improved as time permits.

(3) Armored vehicles. Vehicles will be used when shelters listed in (1) and (2) above are not available and time precludes constructing such shelters.

(4) Buildings. Buildings of masonry construction will be used in preference to those constructed of wood or other materials.

(5) Clothing, shelter halves, etc. Exposed personnel will, when possible, cover all exposed skin and further cover clothing with such items as shelter halves, blankets, canvass, etc.

(6) Sandbags in vehicles. Vehicles operating in contaminated areas will, where practicable, be equipped with sandbags on the floors and sides to reduce radioactivity being emitted from the ground.

b. When fallout has ceased, individuals will, where practicable, decontaminate as follows:

(1) Brush clothing and personal equipment thoroughly to remove fallout particles. This should be done in an area away from that which the individual will occupy.

(2) Bathe thoroughly, preferably by showering, and change clothing. Insure personal effects such as billfolds, watches, etc., are decontaminated; otherwise discard them.

(3) Decontaminate individual equipment by brushing, wiping, and, as appropriate, scrubbing.

(4) Decontaminate the immediate area in which the individual is located by hosing or turning the soil as appropriate. (For example, the soil within a foxhole should be removed and the soil around a foxhole turned over or covered to bury the fallout; tents, vans, and other vehicles should be hosed.)

(5) Clean other equipment as required. When available, high pressure steam or high pressure air is most effective.

c. Maintain a full canteen of water and sufficient rations to permit the individual to remain in a protected area for a minimum of 24 hours.

d. Reduce stay time in contaminated areas. Only tasks which are vital to accomplishment of the unit mission should be performed in radioactive contaminated areas. Individuals entering the contaminated area should have maximum protection consistent with the task to be performed and should remain in the contaminated area the minimum practicable time.

WALLACE
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Appendix: 1—Nuclear Burst Report
Distribution: Same as SOP
OFFICIAL:
/s/ Kay
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(Classification)

20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

App 1 (Nuclear Burst Report) to Annex D (Prediction of Fallout, Radiological Monitoring, and Survey)

DATE—TIME GROUP ____

LINE NO	DESIRED DATA	DATA
1.	Reporting unit	_____
2.	Time of burst	_____
3.	Type of observation	_____
4.	Location of observation	_____
5.	Ground zero	_____
	Either: a. Coordinates	
	b. Azimuth	
	c. Azimuth and distance	
6.	Height of burst	_____
	Either: a. Height	
	b. Vertical angle	
7.	Cloud top	_____
	Either: a. Height	
	b. Vertical angle	
8.	Cloud diameter	_____
	Either: a. Diameter	
	b. Subtended angle	
9.	Weapon yield	_____
10.	Observed effects	_____

Instructions:

1. Transmit promptly (encoded appropriate portions as required by SSI or SOP).

2. Make msg brief.

3. Transmit by line no only those lines of above msg for which data are available.

4. Transmit burst loc data (lines 5 and 6) immed after measurement. Coord readings on the stem should be taken 15 seconds after detonation.

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20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

Annex E (Army Aviation) to SOP NO. _____.

1. APPLICATION
Applies except when modified by div order.

2. ORGANIZATION FOR COMBAT
a. Tactical grouping.
(1) DS plat.
(a) Plat HQ—avn co.
(b) Cmbt Spt Flt A—spt 1/61 Inf.
(c) Cmbt Spt Flt B—spt 2/62 Inf.
(d) Cmbt Spt Flt C—spt 3/63 Inf.
(e) Cmbt Spt Flt D—spt 4/64 Inf.
(f) Cmbt Spt Flt E—spt 5/65 Inf.
(g) Arty Flt—spt div arty.
(h) General. All avn spt elm normally under operational control of spt unit and may be atch to supported units when required by the sit. When atch, admin spt prov by tac units will not include sup of avn POL or repair parts, avn med svc, pers parachute maint, or maint of avn electronics. These resp remain with avn co or aprop tech svc.
(2) Aerial surveillance plat—GS div.
(3) GS plat. Op con div avn off to prov—
(a) Spt for div comdr and div HQ.
(b) Spt for div engr and sig elm.
(c) Reinf DS plat.

b. Div avn sec. Div main CP.

c. Div avn co. Div avn co (fwd) vic div main CP; avn co (rear) loc div tns area.

d. Atch avn spt. Avn atch to or in spt of div from other units will be under op con of div avn off for empl as required in spt of div msn.

3. INTELLIGENCE
a. Reconnaissance and surveillance.
(1) Preplanned vis and photo air recon msn w/in capa-

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bilities of spt or atch flt or sec asg by units being supported.

(2) Avn capabilities of organic Army avn will be fully exploited prior to req for inter-Svc spt.

(3) Req for pers airlift in spt of extended gnd recon submitted through comd channels.

(4) Obsn.

(a) Area coverage of all organic avn elm coord by G2 air and div avn off.

(b) Extent of area coverage rept to div avn sec.

b. Enemy Material. Avn maint prov tech assistance to div G2 for optr en avn mat.

c. Req for avn charts and photos directed to div engr.

d. Counterintelligence.

(1) Pers forced down behind en lines and not immed retrieved will move to pick-up pts designated in avn anx to div OPORD. Pick-up pts will not be occupied by downed pers except periods of 30 min prior to and fol sunrise and sunset unless mutual ident between downed pers and pickup has been estb.

(2) Documents containing classified info, except daily SOI extracts, will not be carried fwd of friendly dspo.

4. OPERATIONS

a. Security.

(1) Local sec of base airstrip resp of avn co comdr. Area def resp of tn comdr.

(2) Local sec of fwd airstrip resp of senior avn off. Area def resp of supported unit.

b. Combat.

(1) Spt or atch avn elm cease on div order.

(2) Req for offensive air as cover for organic avn elm submitted through comd channels to FSCC.

(3) Req for lifting of friendly fires to permit organic avn empl submitted to FSCC.

(4) Rept loc all airstrips prior to occupation.

(5) Req for engr spt coord with div avn off.

(6) Req for additional avn spt.
  (a) Immed through spt or atch elm to avn co op sec.
  (b) Other through comd channels.

(7) CB.
  (a) Def. See Annex F, div SOP.
  (b) Offensive. Organic or atch avn empl in CB distr on order div comdr.

(8) Smoke. Organic or atch avn empl as smoke distr on div order and coord with FSCC.

(9) Battle area illumination. Organic or atch avn empl as illumination means on div order and coord with FSCC.

(10) AD. Acft atk by en air or gnd fire take evasive action and rept immed loc, type, and quantity of en action to div FSCC.

(11) Def against nuclear attack. All avn elm constantly alert for en action indicating empl of nuclear wpns. Following empl of nuclear wpns by en, obsn and surveillance effort concentrated on detection of en attempt to exploit effects.
  (a) Spt elm.
    1. Be prep to prov emerg peakload aero-med evac.
    2. Prov radiological survey and monitoring of blast and fallout areas on div order.
  (b) GS plat.
    1. Prov airlift to reinf spt elm in radiological survey.
    2. Prov airlift to reinf spt elm in aero-med evac msn.
    3. Prov airlift for trans of CATs.
  (c) Movement.
    1. Spt elm displace with supported unit. Prior notification of new airstrip to div avn sec.
    2. Div avn sec displace with div main CP.
    3. Avn co (—) displace as aprop.
  (d) Communications.
    1. Wire comm to avn co subor elm from closest area sig center.
    2. Lateral comm maint between spt or atch elm on fwd airstrips.
    3. Avn co (—) satellites on div main sig center when possible to prov following:

a. Direct line G2–3 to avn co operations.
b. Direct line FSCC to avn co operations.

4. Recon for new div base airfield coord with div sig off and HQ comdt.
5. Div avn off be prep to estb mov con center (MCC) for hel op.

5. LOGISTICS

a. Supply.

(1) Cl I.
(a) Spt and atch elm by supported units.
(b) Div avn sec by div HQ co.

(2) Cl II and IV.
(a) Spt or atch avn elm receive avn items from avn co.
(b) Avn co (—) by req to aprop tech svc.

(3) Cl III.
(a) All elm maint prescribed load.
(b) Supply of avn POL through div QM.

(4) Salvage. Avn items salv by spt acft maint det.

b. Logistical employment.

(1) Emerg aerial sup. By req to DLCC.
(2) Aero-med evac. By req to DLCC.
(3) Aerial pers trans. By req to avn co op.

6. REPORTS

a. Daily status rept for all acft submitted with veh status rept by—

(1) Spt units for atch acft.
(2) Avn co for all other acft.
(3) Avn sec prov G4 with consolidated rept by 2200.

b. Daily op rept to G3 by div avn sec.

WALLACE
Maj Gen

Distribution: A

OFFICIAL:
/s/ Kay
KAY
G3

(Classification)

20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

Annex F (Chemical, Biological and Radiological Warfare) to SOP NO. _____.

1. GENERAL
   a. Purpose. To estb procedures for protection against CBR atk for units of this comd.
   b. Unit procedure. Subor units SOP will conform.

2. REFERENCES
   FM 20–40 and FM 21–41 and AR 220–58.

3. ORGANIZATION
   a. Comm from unit monitors concerning CB matters through comd channels. Designated CBR survey personnel report information to CBRC by most direct means aval.
   b. CB monitor and survey teams will be formed at the BG, bn, and co level, using trained pers and operating under the supv of unit comdr. Pers who are especially trained in CB warfare advise and assist their comdr when required.
   c. Decon specialist trained as required.

4. RESPONSIBILITIES
   a. Each indiv will—
      (1) Immediately mask and give the alarm in the event of CB atk.
      (2) Rept any captured CB pers or eqp.
      (3) Maint pers CB protective eqp in good repair.
   b. Unit comdr are resp for—
      (1) Proficiency of pers in all phases of CB defense.
      (2) Proper and expeditious proc of captured en CB pers and eqp.
      (3) Inspection and maint of CB eqp.
      (4) Aprop warning to be transmitted on unit voice radio comd net immed on confirmation.
      (5) Org (first and second echelon) decon.
   c. Div cml off will—
      (1) Prov tech advice and assistance to div and unit comdr and gen or sp staff off as required.

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(2) Prov tng aids concerning en eqp, mat, and CB agents.
(3) Supv the sup and maint of CmlC items of protective eqp and supv CB tng and tech intel activities.
(4) Recommend and exercise tech supv of survey op as required.
(5) Maint contamination sit map and advise comdr on actions to min cas.
(6) Supv third-echelon decon projects.

d. Div QM resp for issue of protective clo and arrangements for decon of clo by QM element of higher ech spt the div.

e. Div engr resp for decon op requiring earth-moving eqp, const or protective shelter, and furnishing potable water.

f. Div surg resp for analysis of BW samples and advice to comdr on actions to minimize cas.

5. TYPES OF ALERTS

a. Possible CB atk (en capable of CB atk) : alert to be given by this HQ. See paragraph 6a.

b. Imminent CB atk (en believed prep for CB atk) : alert to be given by this HQ. See paragraph 6a.

c. Actual atk (en CB in progress) : alert to be given by first indiv detecting the atk. See paragraph 6b.

6. PROCEDURE IN CASE OF ATTACK

a. Action prior to atk.
(1) Units alerted for possible CB atk ack rec of alert, but take no further action until notified by this HQ.
(2) Units alerted for imminent CB atk ack rec of alert and put indiv and collective protective meas on ready basis. Personnel wear protective clothing and carry masks.

b. Action during atk.
(1) Wear all nec protective eqp.
(2) Execute collective protection meas.
(3) Inform higher, lower, and adjacent units of atk by most rapid means.

c. Action after atk.
(1) Announce "all clear," as detm by unit comdr.
(2) Decon.

(3) Resup protective eqp as required.
(4) Mark and rept contaminated areas to higher, lower, and adjacent units.
(5) Submit rept of en use of CB agents (DA Form 890).

7. PROTECTION
a. Individual. Indiv carry protective mask and associated eqp and is resp for self aid.
b. Collective. Const of collective protective shelters at discretion of unit comdr.
c. Tactical.
(1) Unit comdr prescribe eqp and procedures required for occupation of or passage through contaminated areas.
(2) Sup and eqp dispersed as much as the sit permits and maint under cover.

8. DECONTAMINATION
a. Units perform org decon.
b. Submit requirements for fld decon and/or large area decon to div cml off.

9. SUPPLY
Emerg rqn for CB eqp submitted by most expeditious means.

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Distr: A
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G3

(Classification)

20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

Annex G (Rear Area Security) to SOP _____.

1. PURPOSE

To estb pro for rear area sec planning and op wi div rear area.

2. GENERAL

Div tn comd is resp for rear area sec under GS supv of G3. Units and inst loc in div rear area are resp for their own local sec plans. The div tn comd supv and coord the execution of rear area sec plans.

3. INTELLIGENCE

a. Info of any en atk (guerrilla, nuclear detonation, gnd atk, air atk, or any other) will be rept to G2 immed.

b. Counterintelligence. Info pertaining to trans and storage of nuclear components will be disem on a need-to-know basis.

4. OPERATIONS

a. Orders.

(1) Div tn comdr resp for sec of div rear area. He assigns resp and tasks to elements under his con to insure all-around sec. Div tn comdr will prov, from sources aval with div tn area, small provisional sec detachments.

(2) Tac units loc in div rear area whose primary msn is rear area sec will be designated in current OPORD. These units may be placed under the operational con of div tn comdr for specific tasks, periods of time, or specific op.

(3) Units and instl in div rear area are resp for their own local sec.

b. Security. General area for div tn is designated by G4 after coord with G3 and G1. Specific areas for elements of div tn are designated by tn comdr. Primary consideration will be given to unit's ability to accomplish its msn. Other considerations include dispersion between units and instl, and def of area.

(Classification)

c. Reports. Any incident assoc with rear area sec incl nuclear or airborne atk, etc., will be rept immed through comd channels to div HQ. Rept will include geographical coord in incident, type of incident, extent of damage, and/or cas and spt required.

5. ADMINISTRATION

a. Supply.

(1) Level of emerg sup indicated in current OPORD.

(2) Rqn for sup directly related to rear area sec msn will be submitted through normal sup channels citing special auth.

(3) Sup required by units and detachments op in an incident area will be obtained from nearest aval source.

b. Evacuation and hospitalization. When med requirements are beyond cpbl of units involved in rear area sec, div surg will prov additional means in coord with div tn comdr.

c. Transportation.

(1) Div trans off will prov nec additional trans required to spt rear area sec op in coord with div tn comdr.

(2) Div tn comd will coord with G4 regarding changes in div mov and tfc con plans required as a result of an incident.

d. Personnel. Div tn comd will coord estb of tfc con post, when nec.

e. CA.

Maximum use will be made of civ personnel including police and med pers, housing, trans, and other facilities in affected areas.

f. Reestablishment of administrative support. Reestablishment of admin spt after an incident is resp for aprop tech or admin service, under supv of aprop gen staff off, and coord through div tn comdr.

7. COMMAND AND SIGNAL

a. Units within div rear area may be asg area dam con msn.

b. Div tn comd will coord local sec and area dam con plans airborne atk, etc., will be rept immed through comd channels to div rear area. Comd of nondiv units will be assumed by div tn comd only upon auth of this HQ.

(Classification)

c. Area comm system augmented by unit radio nets will be utilized for rear area sec.

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Distribution: A

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(Classification)

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20th Inf Div
FORT LEAVENWORTH, KANSAS
1 Sep 19____

Annex H (Signal) to SOP NO. _____.

1. COMMUNICATION CENTERS

a. Communication centers will be operated continuously at administrative and tactical echelons.

b. During operations, precedence of all messages will conform to the provisions of AR 105–31, ACP 121, and FM 24–17. All messages will be written on message form DD 173, DD 173–1 and DA Form 11–170 (M210 Message Book). "FLASH" precedence will be used only in actual combat. It will not be used in exercises, problems, maneuvers, or CPXs.

c. Rept excessive delays to message originators and to the signal (communications) officer of the headquarters concerned.

d. Units will be prepared to operate airdrop and pickup service at tactical echelons.

2. MESSENGER SERVICE

a. A scheduled messenger service will be operated to all assigned and attached major units of the division including division trains and division rear. Frequency of delivery and pickup will be determined by the division signal officer.

b. Special messengers will be available at message centers for high precedence communications.

3. RADIO COMMUNICATIONS

a. Radio nets.

(1) Radio nets will conform to those prescribed in the current division SSI and SOI, as implemented or modified by the signal annex of the division operation order (plan) in effect.

(2) Radio teletypewriter operators of the army logistical nets, corps or army command net, and division administrative and logistical net will keep message center informed of the status of their nets.

(Classification)

b. Restrictions.

(1) Listening silence will be broken only on orders of the headquarters imposing the silence or under special conditions stated in OPORD. Proper identification of the unit requesting break of radio silence is necessary before passing any traffic.

(2) All restrictions imposed on radio stations lifted when unit makes contact with the enemy, unless otherwise specified in OPORD.

(3) Readability and calibration checks made upon initial opening of each radio net. Thereafter they will be exchanged once every 4 hours. If traffic has been passed in the previous period, readability will NOT be exchanged. When the net control station institutes readability checks for an entire net, each subordinate station will permit 30 seconds of open-air time from conclusion of preceding station's transmission before initiating its report.

c. Interference. Rept interference between tactical stations to the next command. Include call letters, frequency, and time of interference and signal strength of interfering station.

d. Security.

(1) Authenticate when opening or closing a net, imposing or lifting radio listening silence, during frequency changes, and at any other occasion that the operator deems it necessary for maximum radio security.

(2) Radio stations will NOT attempt to enter, jam, or otherwise interfere with unknown radio nets, even if such nets should be identified as enemy, except on orders from division signal officer.

(3) Report jamming or attempts to enter division radio nets by unknown stations to division signal officer without delay, giving time, frequency, type of jamming (interference), signal strength, readability, and identity (if obtainable) of interfering station.

4. RADIO RELAY COMMUNICATIONS

a. Multichannel radio telephone facilities established between the division command post and area signal centers at battle

groups and such other locations as the division signal officer directs.

b. Radio relay terminals at battle group or other subordinate headquarters remain under the operational control of the division signal officer; equipment and personnel will be employed as directed by division signal officer. Construction of keying lines between the radio relay terminal and unit switchboard is the responsibility of the personnel operating the radio relay equipment.

c. When unable to establish radio contact, division units request radio relay by army aircraft.

5. WIRE COMMUNICATION

a. Installation. When practicable, each headquarters below division construct minimum of one field wire circuit to subordinate units. Div sig bn provides minimum of two circuits to battle groups by means of radio relay and wire.

b. Commercial facilities. Commercial facilities will not be used without prior approval of the division signal officer. All communications extending into enemy territory will be disrupted and the facilities preserved pending instructions from the DSO unless operational necessity requires their destruction.

c. Wire recovery. Recover wire as the tactical situation permits.

d. Reports.

(1) One copy of circuit diagram, traffic diagram, and line route map will be forwarded to the division signal officer by BG, div arty, bn and sq.

(2) One copy each of the division line route map, circuit diagram, and traffic diagram will be forwarded to brigade and division artillery headquarters to assist in reestablishing the communication system if required.

e. Repair. Should wire circuits be damaged, by foot or vehicle traffic, they shall be repaired as effectively as possible and reported by grid coordinates.

f. Telegraph and teletypewriter. Division establish teletypewriter facilities at the area signal center for the battle groups and division artillery.

(Classification)

6. VISUAL AND SOUND COMMUNICATION

a. Units reproduce and distribute as items of unit SSI and SOI, visual and sound items of the division SSI and SOI.

b. Suitable alerting devices mounted near unit message centers.

c. General alarms sounded over the signal communication system of each unit.

d. Units display panels as necessary.

7. AIR COURIER SERVICE

Aviation company prepared to fly air couriers.

8. SIGNAL SECURITY

a. Authentication codes, map coordinate codes, operation codes, and other brevity codes of division and higher headquarters will NOT be carried forward of battle group, division artillery, bn and sq and separate company command posts without prior approval of the division signal officer.

b. POLLUX key lists will NOT be extracted, copied, or reproduced by units subordinate to this headquarters.

9. PHOTOGRAPHIC

Division photo section furnish ground still and motion picture coverage as directed by division signal officer. Request for aerial photo coverage to G2 air; all other photo requests to division signal officer.

10. MISCELLANEOUS

Assignment of a forward area signal centers by this headquarters to subordinate units determined by the location, mission, and size of the unit concerned.

WALLACE
Maj Gen

Distr: Same as SOP

OFFICIAL:
/s/ Kay
KAY
G3

(Classification)

APPENDIX IV

VEHICLE REQUIREMENTS—INFANTRY DIVISION

1. General

The ground vehicular mobility of the infantry division is limited without augmenting its organic transportation. The augmentation is required primarily by the rifle companies of the battle group. In this appendix the number of additional vehicles required to make units 100 percent mobile is presented in Section C of Table I for the battle group, and for other components of the division, in Table II. The numbers presented are based upon divisional units having 100 percent strength in personnel and equipment, as prescribed by the 7D series TOE, 1 February 1960.

2. Component Mobility

a. The following components of the infantry division are completely mobile with organic transportation.

(1) Infantry division headquarters and headquarters company.
(2) Infantry division armor battalion.
(3) Infantry division cavalry squadron.
(4) Infantry division aviation company (with use of aircraft).
(5) Infantry division engineer battalion.
(6) Infantry division artillery.
(7) Transportation truck company.
(8) Transportation armored carrier companies.

b. The following components are not 100 percent mobile with organic transportation. See tables I and II for type and amount of transportation required to achieve complete surface vehicle mobility.

(1) Infantry division battle group.
Headquarters and headquarters company—75 percent mobile.
Rifle company—15 percent mobile.
Combat support company—90 percent mobile.
(2) Infantry division signal battalion.
Headquarters and heaquarters company—30 percent mobile.

Command operations company—80 percent mobile.
Forward communications company—90 percent mobile.

(3) Headquarters and headquarters detachment infantry division.
Trains and infantry division band—10 percent mobile.

(4) Infantry division medical battalion.
Headquarters and headquarters detachment—25 percent mobile.
Ambulance company—100 percent mobile.
Clearing company—10 percent mobile.

(5) Infantry division ordnance battalion.
Headquarters and main support company—70 percent mobile.
Forward support company—100 percent mobile.

(6) Infantry division administration company—10 percent mobile.

(7) Transportation battalion.
Headquarters and headquarters company—50 percent mobile.

(8) Aircraft maintenance detachment—60 percent mobile.

(9) Infantry division quartermaster company—50 percent mobile.

Table I. Mobility Data—Infantry Division Battle Group

TYPE OPERATION	*Battle Group Headquarters Company*	*Combat Support Company*	*Each Rifle Company*	*Battle Group Total*
1. TACTICAL EMPLOYMENT				
a. Armored carriers required to mechanize the battle group (to mechanize rifle platoons and provide command control).	2	0	13	67
b. 2½-ton trucks required to motorize rifle companies only.			7	35
2. ADMINISTRATIVE MOVE				
a. 2½ ton trucks required to completely motorize the battle group (in addition to organic vehicles).	1	1	7	37
b. Armored carriers required to provide complete mobility to battle group (in addition to organic vehicles).	1	1	13	67

Table II. Additional Vehicle Requirements for Other Divisional Components

TRUCK REQUIREMENTS*	Signal Battalion	Headquarters and Headquarters Company Signal Battalion	Command Operations Company, Signal Battalion	Forward Communications Company, Signal Battalion	Headquarters and Headquarters Detachment, Division Trains & Division Band	Medical Battalion	Headquarters and Headquarters Detachment, Medical Battalion	Ambulance Company	Clearing Company	Ordnance Battalion	Headquarters and Main Support Company, Ordnance Battalion	Forward Support Company, Ordnance Battalion	Administration Company, Infantry Division	Headquarters and Headquarters Transportation Battalion	Aircraft Maintenance Detachment	Total
2½-ton Trucks	8	(5)	(2)	(1)	3	10	(2)	(0)	(8)	2	(2)	(0)	8	2	1	34

*Does not include vehicles required to transport division reserves of supplies.

APPENDIX V
AIRCRAFT REQUIREMENT TABLES

Section I. INTRODUCTION

1. General

This appendix presents aircraft requirements for the movement of the infantry division and its components under varying conditions. The appendix is divided into two major parts. Section II presents data for the air movement of the entire division in Air Force transport aircraft. Section III covers the movement of a battle group task force in Army aircraft.

2. Basis

Computations in this appendix are based upon an infantry division organized in accordance with the 7D series tables of organization and equipment.

Section II. AIRCRAFT REQUIREMENTS TABLES— INFANTRY DIVISION

3. General

Tables in this section indicate aircraft requirements for air-landed operations of the infantry division, using all heavy aircraft (C–124) or a combination of heavy (C–124) and medium (C–130) aircraft. These tables are prepared as a guide for general planning purposes only, and do not necessarily reflect the optimum echelonment of units or the exact number of aircraft required.

4. Basis

The data contained in these tables are based on the following:

a. Allowable cargo load of aircraft (range of 1,000 nautical miles with refueling available at destination):

C–130A	29,500 lb
C–124C	47,600 lb

b. Weight of personnel: 240 lb.

c. Vehicles carry sufficient gasoline for 300 miles operation. If

the fuel tank capacity of the vehicles does not provide this, additional means are provided.

d. The followup echelon arrives within 72 hours.

e. All units carry a basic load of ammunition and 3 days of class I supply. The 3 days of class I supply are carried in the initial echelon as follows:

1 day—carried by individuals.
1 day—carried by unit.
1 day—carried by the quartermaster company.

f. All Army aircraft except the airplane observation medium (AO–1), which can be ferried in, are transported to the objective area in transport aircraft with sufficient aviation gas and lubricants to permit 24 hours of operation for each aircraft after arrival in the objective area. (Whenever possible all organic aircraft should be flown to the objective area.)

g. The rear echelon consists of those items of heavy equipment that are not transportable in heavy aircraft and those units and individuals not required during the early stages of the operation. A minimum of two personnel per unit remain in the rear area to guard unit and personal equipment.

h. The aircraft requirements are computed by the type-load method using the principle of maintaining tactical integrity of company-size units for the initial echelon.

i. In the portion of the table which shows aircraft requirements using a combination of medium and heavy aircraft, maximum use is made of medium aircraft. When heavy aircraft are required to move large items, such as the 5-ton wrecker, the heavy aircraft loads are filled out using equipment that might otherwise be moved in medium aircraft.

j. The tons additional lift not used represent the difference between the total weight of the type loads (the bulk cargo tonnage in each type load, which can be varied within the limits of the aircraft lift capability) for a given unit and the total lift capability of the type aircraft used under the specified range condition.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Unit	PERSONNEL AND EQUIPMENT TO BE AIRLIFTED												AIRCRAFT REQUIREMENT MEDIUM AND HEAVY AIRCRAFT			AIRCRAFT REQUIREMENT HEAVY AIRCRAFT ONLY		REMARKS
		Trucks and powered vehicles					Trailers and towed loads					Wt in tons	Aircraft requirement		Tons add lift not used	C-124 acft required	Tons add lift not used	
	Personnel	Truck ¼-ton	Truck ¾-ton	Truck 2½-ton	Truck 5-ton	Miscellaneous	¼-ton tlr	¾-ton tlr	1½-ton tlr	1½-ton water	Miscellaneous	Personnel equipment and supplies	C-130	C-124				
Div and atch, total	10,880	686	518	272	88		412	463	186	37		11,790	614	175	1,295	594	2,716	
HQ & HQ co, inf div, with atch	297	36	5			2 amb, ¼-ton	24	7				131	12		28	7	17	
Avn co	170	10	17	8		2 shop van, 2½-ton 13 hel, H-13 4 hel, H-19 7 acft, L-19 4 acft, L-20	9	16	15		1 tlr, gen	250	22	4	181	16	130	4 airplace AO-1—ferry in
5 battle groups (ea)	1,244	68	49	8	7		47	49	16	7		761	53	3	73	42	219	
HQ & HQ co	192	23	10	7	7	14 amb, ¼-ton 3 trk dump, 5-ton 1 shop van, 2½-ton	22	10	5	7	2 tlr, ammo, 2-ton 3 tlr, util, 2½-ton	286	21	1	25	16	75	
5 rifle co (ea)	177	5	4				3	4				54	4		6	3	18	
Combat spt co	167	20	19	1		2 AC	10	19	1			205	12	2	18	11	54	
Armor bn, 90-mm	3	1					1											
HQ & HQ co	3	1					1											Loaded with HQ & HQ co, inf div
5 med tank co (ea)																		
Cav sq	401	61	6	2	3		7	3	2			448	19	9	45	20	28	
HQ & HQ troop	89	7	3	2	3	4 amb, ¼-ton	1		2			94	7		9	5	25	
3 armored cavalry troop (ea)	104	18	1			3 mortar, 4.2-in, SP	2	1				118	4	3	12	5	1	
Engr bn	584	20	9	4			19	7	6			682	42	10	155	32	64	
HQ & HQ co	119	5	4	4		3 trk, dump 5-ton 2 grader 3 loader, scoop	4	2	6			142	12		15	7	14	
5 engr co (ea)	93	3	1			6 trk dump, 2½-ton 1 trk trac, 5-ton 1 trac med, DBP	3	1			6 tlr, util, 2½-ton 1 tlr, 25-ton	108	6	2	28	5	10	
Div arty	1,946	156	120	97	50		56	93	36			3,884	122	100	282	176	286	
HQ & HQ btry, div arty	144	10	18	8		1 amb, ¼-ton 2 shop van, 2½-ton	2	12	3			187	12	1	7	9	12	
3 FA how bn, towed (ea)	310	25	17	16	10		10	14	6			622	20	16	55	28	46	
HQ & HQ btry, how bn, towed	133	19	13	6	5	1 amb, ¼-ton	8	10	4		5 tlr, ammo, 2-ton	242	10	5	26	11	22	
FA how, btry, 105-mm, towed	83	3	2	8	2		1	2	1		6 105-mm how 2 tlr, ammo, 2-ton	140	8	2	25	6	3	11 tons basic load ammo w/HQ btry, FA how bn, towed
FA how btry, 155-mm, towed	94	3	2	2	3	6 trac, 13-ton	1	2	1		6 155-mm how 3 tlr, ammo, 2-ton	240	2	9	4	11	21	27 tons basic load ammo w/HQ btry, FA how bn, towed
2 FA how bn, SP (ea)	296	25	13	15	10		10	10	5			577	16	16	34	26	42	
HQ & HQ btry, how bn, SP	131	19	11	15	5	1 amb, ¼-ton	8	8	3		5 tlr, ammo, 2-ton	217	8	5	14	10	21	
FA how btry, 105-mm, SP	72	3	1	8	2		1	1	1		6 105-mm how 2 tlr, ammo, 2-ton	139	7	2	12	6	4	7 tons basic load ammo w/HQ btry, FA how bn, SP
FA how btry, 155-mm, SP	93	3	1	2	3	6 trac, 13-ton	1	1	1		6 155-mm how 3 tlr, ammo, 2-ton	221	1	9	8	10	17	28 tons basic load ammo w/HQ btry, FA how bn, SP. 2½-ton trk and twd 105-mm how subs for 105-mm SP. Trac and twd 155-mm how substituted for 155-mm SP.
FA rkt/how bn	280	21	25	12			4	19	5			677	18	19	42	31	53	
HQ & HQ btry, FA rkt/how bn	111	14	15	5		2 trk, 10-ton 1 amb, ¾-ton	1	12	3		2 tlr, ammo, 2-ton	215	13	3	28	10	20	
FA how btry, 8 in, towed	94	3	2	2		1 shop van, 2½-ton 6 trk, 10-ton	1	2	1		4 8-in how	272	1	11	8	12	15	15 tons basic load ammo w/HQ btry, FA rkt/how bn
FA msl btry, 762-mm rkt, SP	75	4	8	5		2 shop van, 2½-ton 2 wreckers, 5-ton 2 launchers, 762-mm, trk mtd	2	5	1		4 tlr, 762-mm rkt	190	4	6	6	9	18	18 tons basic load rkts w/HQ btry, FA rkt/how bn (6 rkt)
Sig bn	412	15	72	19			15	50	7			838	26	22	73	42	152	
HQ & HQ co	116	7	9	12		2 shop van, 2½-ton 1 trk, 2½-ton, w/AN/TFQ-7 2 trk, 2½-ton, w/AN/MRC-69 3 trk, 2½-ton, w/AN/MRC-54	7	9	15			224	9	5	28	11	37	
Comd op co	154	8	22	7		4 trk, 2½-ton, w/AN/GRC 26 13 trk, 2½-ton, w/AN/MRC 69	8	15	2			311	7	9	10	15	37	
Fwd comm co	142		41			15 trk, 2½-ton, w/AN/MRC 69		26				303	10	8	35	16	78	
HQ & HQ det and band, div tns	20	5	3				5	3										Loaded with QM co (not included in QM co totals)
QM co	107	3	12	1		20 trk tank gas, 2½-ton	3	12	2			271	19		8	13	38	42 tons class I (1 day rations) to trk trans co; gas trucks and tlrs ⅔ filled; includes elements of GR REG platoon
Med bn	262	11	6	5			11	6	3	2		268	19		12	14	65	
HQ & HQ det	49	6	3				6	3				268	19		12	14	65	
Amb co	91	4				36 amb, ¾-ton	4											
Clr co	122	1	3	5			1	3	3	2								
Ord bn	199	15	19	12			15	19	13			414	13	10	9	18	7	
HQ & Main spt co	4	5	3				5	3										Loaded with forward support company
Fwd spt co	159	10	16	12		1 shop van, 2½-ton 8 wreckers, 5-ton	10	16	13			414	13	10	9	18	7	
Trans bn	203	11	2	81			11		81			799	55	1	136	42	293	
HQ & HQ co	54	6	2	1		1 wrecker, 5-ton	6		1									
Trk trans co	149	5		80			5		80			799	55	1	136	42	293	Loaded w/HQ co, trans bn
2 AC co (ea)																		
Acft main det	59	2	2	2		2 trk trac, 2½-ton 1 trk trac, 5-ton 1 trk trac, wrecker, 5-ton	1	2	1		3 slr shop van, 6-ton	20		4	1	4	1	
Total attachments	63	6	1				4	1										Loaded w/HQ & HQ co, inf div and included in HQ & HQ co totals
Mil intel plat	51	5	1				3	1										
Air In team	6	1					1											
FAC	6																	

Table III. Initial Echelon (Aircraft Requirement Table, Infantry Division, 1,000 Nautical Mile Range, Air-Landed Operation)

1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
		Trucks and Powered Vehicles					*Trailers & Towed Loads*					*Wt in tons*	*Aircraft Requirements, Combined Medium and Heavy Aircraft*			*Aircraft Requirement Heavy Aircraft only*		
Unit	*Personnel*	*Truck ¼-ton*	*Truck ¾-ton*	*Truck 2½-ton*	*Truck 5-ton*	*Miscellaneous*	*¼-ton tlr*	*¾-ton tlr*	*1½-ton tlr*	*1½-ton water*	*Miscellaneous*	*Personnel, equipment, and supplies*	*C-130 acft*	*C-124 acft*	*Tons add lift not used*	*C-124 acft*	*Tons Add lift not used*	*Remarks*
Division and attachments, total	1,895	68	51	160	5		83	38	125	48		6,124	167	199	985	306	1,099	
HQ & HQ co, inf div	78	24	2	3			22		3	2		84	7		19	4	11	
Avn co	82		10	9		1 shop van, 2½-ton 1 wrecker, lt, 2½-ton 1 crash truck 4 hel H-13 1 L-20 7 L-19 2 Trk 2½-Ton w/AN/MPQ-29		10	5	1		173	12	2	53	10	66	Drone system loaded as cargo
5 battle group (ea)	98		2	8			4	2	8			121	9		12	6	22	
HQ & HQ co	43		1	7		1 wrecker, lt, 2½-ton		1	7			121	9		12	6	22	
5 rifle co (ea)	5																	
Combat sup co	30		1	1		1 wrecker, lt, 2½-ton	4	1	1									
Armor bn, 90-mm																		
HQ & HQ co																		
5 med tk co (ea)																		
Cav sq	111	1	3	11	5		1	2	24	4		490	11	16	48	24	71	
HQ & HQ trp	69	1	3	5	5	2 wrecker 5-ton 5 AC	1	2	18	1		490	11	16	48	24	71	
3 armored cavalry troops (ea)	14			2		3 AC			2	1								Loaded w/HQ trp, cav sq
Engr bn	161	8	1	19			7	2	14	6		707	23	21	95	36	137	
HQ & HQ co	101	8	1	4		2 trk trac, 2½-ton 6 trk dump 5½-ton 1 wrecker 5-ton 3 trk, stake, 5-ton 2 grader 4 trac, med, DBP 1 trk, tank, gas, 2½-ton	7	2	9	1	3 tlr util, 2½-ton 2 stlr elec shop van 4 stlr, 25-ton	707	23	21	95	36	137	
5 engr co (ea)	12			3		4 trk trac, 5-ton 2 trk dump, 5½-ton 1 trk trac, 5-ton 1 trac med DBP			1	1	1 tlr, 25-ton							Loaded w/HQ co, engr bn
Div arty	217	2	5	32			1	2	14	20		621	28	15	148	31	115	
HQ & HQ btry, div arty	62	2	5	6		3 shop van, 2½-ton	1	2	2	2		98	4	2	8	5	20	
3 FA how bn, towed (ea)	23			3					1	3		53	4	1	30	3	18	
HQ & HQ btry, FA bn, towed	12			1		1 wrecker 5-ton			1	1		53	4	1	30	3	18	
FA btry, 105-mm towed	6			1		1 trk, tank, gas, 2½-ton				1								Loaded w/HQ btry, FA how bn, towed
FA btry, 155-mm, towed	5			1						1								Loaded w/HQ btry, FA how bn, towed
2 FA how bn, SP (ea)	29			6					3	3		157	4	5	21	7	10	
HQ & HQ btry, FA how bn SP	17			4		1 trk tank gas, 2½-ton 1 wrecker 5-ton 2 AC			3	1		157	4	5	21	7	10	
FA how btry, 105-mm, SP	6			1		1 AC				1								Loaded w/HQ btry, FA how bn, SP
FA how btry, 155-mm, SP	6			1		1 AC				1								Loaded w/HQ btry, FA how bn, SP
FA rkt/how bn	28			5					3	3		50	4		8	3	21	
HQ &HQ btry	17			3		1 wrecker, 5-ton			3	1		50	4		8	3	21	
FA how btry, 8 in, towed	6			1		1 trk, tank, gas, 2½-ton				1								Loaded w/HQ btry, FA rkt how bn
FA msl btry, 762-mm rkt, SP	5			1						1								Loaded w/HQ btry, FA rkt how bn
Sig Bn	99	2	9	10			2	3	7	3		190	7	4	8	9	24	
HQ & HQ co	24	1	1	3		1 trk, 2½-ton w/AN/TFQ-7 1 wrecker, 5-ton	1	1	2	1		190	7	4	8	9	24	
Comd op co	45	1	8	1		4 trk, 2½-ton w/AN/MRC-69	1	2		1								Loaded w/HQ co, sig bn
Fwd comm co	30			6					5	1								Loaded w/HQ co, sig bn
HQ & HQ det & band, div tns	47			2					1	1								Loaded w/admin co
QM co	85		5	10		10 trk tank gas, 2½-ton 5 trk trac, 5-ton 1 wrecker, 5-ton	2	5		1	5 tlr, tank gas, 5,000-gal 9 bath unit, port								Loaded w/admin co Bulk gas tanks 2/3 filled 4 tons class I to trk trans co Includes Graves registration platoon
Admin co	110	10	4	5			10	2	1	2		401	22	6	16	20	38	
Med bn	33			2						2		24	2		6	1		
HQ & HQ det	3			1						1		24	2		6	1		
Amb co																		
Clr co	30			1						1								Loaded w/HQ det, med bn
Ord bn	133	6	1	11			6	1	14	2		485	4	20	50	23	62	
HQ & main spt co	120	6	1	11		5 shop van, 2½-ton 4 wrecker, 5-ton 8 trk trac, 2½-ton	6	1	14	2	8 tlr, 6-ton van	485	4	20	50	23	62	
Fwd spt co	13					2 wrecker, 5-ton 6 AC												Loaded w/HQ & main spt co, ord bn
Trans bn	249	12	1	6			12	1	2	4		2,344	6	115	482	118	465	
HQ &HQ co	64	4	1	6		1 AC	4	1	2	4		90	6	1	22	4	5	
Trk trans co	5																	Loaded w/HQ co, trans bn
2 AC co (ea)	90	4				57 AC	4					1,127		57	230	57	230	
Total attachments	10	10		3			10		3									
Mil intel plat	10	10		3			10		3									Loaded w/HQ co, inf div, and included in HQ & HQ co, inf div totals
Civil affairs plat	22	5	2	2			5					5						Civil affairs platoon loaded with admin co and included in admin co totals.

Table IV. Followup Echelons (Aircraft Requirement Table, Infantry Division Air-Landed Operation, 1,000 Nautical Mile Range)

5. Requirement Tables

Table V. Rear Echelon (Aircraft Requirement Table, Infantry Division, 1,000 Nautical Mile Range, Air-Landed Operation)

1	38	39	40	41	42	43	44	45	46	47	48
Units	Personnel	Trucks and powered vehicles					Trailers & towed loads				
		Truck ¼-ton	Truck ¾-ton	Truck 2½-ton	Truck 5-ton	Miscellaneous	¼-ton tlr	¾-ton tlr	1½-ton tlr	1½-ton water	Miscellaneous
Div and atch, total	1,137	41	8	20	19		12	2	29	6	
HQ & HQ co, inf div	2										
Avn co	9					6 hel H-34					
5 battle gp (ea)	14										
HQ & HQ co	2										
5 rifle co (ea)	2										
Combat spt co	2					2 tank lt gun					
Armor bn, 90-mm	757	40	5	18	19		11	1	27	6	
HQ & HQ co	242	25	5	8	19	8 AC 4 tk med gun 2 tk recov veh med 3 trk wrecker, 5-ton	6	1	17	1	
5-med tank co (ea)	103	3		2		6 APC, ¾-ton 2 AC 17 tank med gun 1 tank recov veh med	1		2	1	
Cav sq	97										
HQ & HQ trp	4					2 tank lt gun 1 tank recov veh					
3 armored cavalry troop (ea)	31					7 tk lt gun 1 tk recov veh med 3 AC					
Engr bn	40										
HQ & HQ co	30					6 trk stake, 5-ton 2 tagline crane & crane shovel 3 tk med gun 3 launcher, M-38 tk chassis					2 tlr util, 2½-ton 3 tlr flatbed, 10-ton
5 engr co	2										
Div arty	38										
HQ & HQ btry, div arty	2										
3 FA how bn, towed (ea)	6										
HQ & HQ btry, FA bn, towed	2										
FA how btry, 105-mm, towed	2										
FA how btry, 155-mm, towed	2										
2 FA how bn, SP (ea)	6										
HQ & HQ btry, FA bn, SP	2					1 tk recov veh, med					
FA how btry, 105-mm, SP	2										
FA how btry, 155-mm, SP	2										
FA rkt/how bn	6										
HQ & HQ btry, FA rkt/how bn	2					1 tk recov veh med					
FA how btry, 8" towed	2										
FA msl btry, 762-mm rkt	2										
Sig bn	20	1	3				1	1			
HQ & HQ co	2										
Coord op co	16	1	3			1 trk 2½-ton w/AN/GRC-26	1	1			
Fwd comm co	2										
HQ & HQ det and band, div tn	2										
QM co	2										
Admin co	80			2					2		
Med bn	6										
HQ & HQ det	2										
Amb co	2										
Clr co	2										
Ord bn	4										
HQ & main spt co	2					2 trk trac, 10-ton					2 tlr, 50-ton
Fwd spt co	2										
Trans bn	10										
HQ & HQ co	4					2 tk recov veh med					
Trk trans co	2										
2 AC co (ea)	2										
Acft maint det											

Section III. ARMY TRANSPORT AIRCRAFT REQUIREMENTS—BATTLE GROUP TASK FORCE

6. General

The tables in this section reflect typical aircraft requirements for the assault echelon of a battle group task force in an airmobile operation. They are illustrative only. They can be used for general planning purposes, but they are not absolute because in each

operation, tactical conditions and aircraft availability and capability can compel changes in the composition of the assault echelon.

7. Discussion of Requirement Tables

a. Tables VI and VII show the rear echelon, including the administrative elements of the task force and heavy equipment that is transported by surface means, as well as the airmobile assault echelon. The assault echelon includes the minimum essential equipment that is transported by light and medium transport helicopters and light transport airplanes. Accompanying supplies are considered sufficient to sustain the force during the assault phase. Followup supplies are required to sustain the force for the defense or subsequent phases of the operation.

b. The data in the tables are based on the tables of organization and equipment of the units in the task force and the following assumptions:

(1) Radius of operation ..... 50 NM

(2) Allowable cargo load of aircraft:
Medium helicopter ..... 6,400 lb
Light helicopter ..... 4,000 lb
Light transport airplane ..... 7,500 lb

(3) Weight of personnel: 240 lb each (includes proportionate share of hand-carried supplies and equipment including crew-served weapons up to, but excluding the 106-mm rifle and 4.2-inch mortar).

(4) Weight of ¼-ton trucks is computed at basic weight, ready for operation but without crews.

(5) Weight of ¼-ton trailers is computed empty.

(6) Radios are those mounted in ¼-ton trucks or which can be readily ground mounted from ¾-ton trucks. Additional radios can be obtained by substitution or conversion.

(7) Mobility for howitzers in the objective area will be obtained by using helicopters or ¼-ton trucks obtained from the Hq and Hq Co of the battle group. ¾-ton trucks for this purpose could accompany the assault echelon in medium helicopters.

8. Requirement Tables

Table VI. Planning Work Sheet

Unit	Personnel (Spaces)[1]	Additional Cargo[1]		Major Items of Equipment[1]					Total Spaces Each Unit	Aircraft Requirements[2]		
		Weight	Spaces	Item	Weight (each)	Spaces (each)	Nr of items	Total spaces		H-34[3]	H-37[3]	AC-1[4]
Hq & Hq co, battle group	152	13,000	54.5	Trk, ¼-ton	2,625	1	34	374				
				Tlr, ¼-ton	550	2.5	19	47.5				
				Generator	141	.5	3	1.5				
				Shelter	900	4	3	12				
				Radio	240	1	16	16				
									657.5	41	26	27
Rifle co (each)	175	1,200	5	Trk, ¼-ton	2,625	1	5	55				
				Tlr, ¼-ton	550	2.5	3	7.5				
				Radio	240	1	1	1				
				106-mm RR	480	2	2	4				
									247.5	16	10	8
Cmbt spt co	158	12,000	50	Trk, ¼-ton	2,625	1	26	286				
				Tlr, ¼-ton	550	2.5	15	37.5				
				4.2-in mort	640	3	6	18				
				Radios	240	1	18	18				
				Radar (med rg)	280	1.5	2	3				
									570.5	36	22	21
FA how btry (–) (towed)	74	18,000	75	Trk, ¼-ton	2,625	1	3	33				
				Tlr, ¼-ton	550	2.5	1	2.5				
				Howitzer, 105-mm	5,000	21	6	126				
				Radio	240	1	2	2				
									312.5	20	12	
Det, HQ & HQ btry, FA how bn	31			Trk, ¼-ton	2,625	1	8	88				
				Tlr, ¼-ton	550	2.5	6	15				
				Radio	240	1	8	8				
									142	9	6	
Battle Group Task Force Total Without Cross Loading										186	116	88
Battle Group Task Force Total With Cross Loading										182	113	80

[1]See tables V and VI for details of personnel and cargo.

[2]Aircraft capability:

	H-34A	H-37A	AC-1
Payload	4,000 lb	6,400 lb	7,500 lb
Capacity (spaces) (one space = 240 lbs)	16	26	31

[3]Aircraft capability computed in accordance with FM 101-10.

[4]The following AC-1 loads were used:

Type A	*Type B*	*Type C*
1-¼ ton truck	2-¼ ton truck	1-¼ ton
1-¼ ton trailer		1 shelter

Table VII. Medium and Light Transport Helicopter Requirements

1	ASSAULT ECHELON (HELICOPTER)											REAR ECHELON (SURFACE)												
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Unit	Pers	Additional cargo	Major items of equipment							Helicopter requirements[1]		Pers	Major items of equipment											
			Trk ¼-ton	Tlr ¼-ton	106-mm rifle	4.2-in mort	105-mm how	Radio	Radar	Med H–37	Light H–34		Trk ¼-ton	Tlr ¼-ton	Trk ¼-ton	Tlr ¼-ton	Trk 2½-ton	Tlr 1½-ton	Trk 5-ton	Tlr 2-ton	Tlr 2½-ton	Loader scoop	Carrier pers	Tank light
HQ & HQ co	152	13,000[2]	34[3]	19				16[4]		26	41	86[5]	3	3	11	11	18[6]	18[7]	7	2	3	1		
5 rifle co (each)	175	1,200[8]	5	3	2			1[9]		10	16	9[10]			4	4								
Combat support co	158	12,000[11]	26[12]	15		6		18[13]	7[14]	22	36	40[15]			19	19	3[16]	2					2	2
Howitzer battery (105-mm, towed)	74	18,000[7]	3	1			6	2[18]		12	20[19]	17[20]			2	2	9	2[21]	2	2				
Det, HQ and HQ btry, howitzer bn	31[22]		8	6				8[23]		6	9													
TOTAL TF	1,290	49,000	96	56	10	6	6	49	7	116 (113)[24]	186 (182)[24]	188	3	3	52	52	30	22	9	4	3	1	2	2

[1]Requirements are computed based on data contained in FM 101-10. Radius is 50 NM. Loading is based on space method described in FM 57-35.

[2]Includes 500 AT mines and 2,000 lb of explosives.

[3]Includes 14 frontline ambulances.

[4]5 VRQ-3; 5 VRQ-18; 1 VRC-10; 1 VRC-24; 1 GRR-5; 1 GRC-19, and 2 GRC-46.

[5]2 liaison officers; 6 cooks; 12 indiv pers section; 48 indiv sup and maint plat (including truck drivers); 2 ¼-ton trk drivers; 10 ¼-ton trk drivers; 5 2½-ton truck drivers; and 1 tractor operator.

[6]Includes 1 2½-ton shop van; 1 2½-ton wrecker; and 3 2½-ton dump trucks.

[7]Includes 7 water tank trailers.

[8]Includes 20 rounds 106-mm rifle ammo.

[9]VRQ-3.

[10]5 cooks; 4 ¼-ton trk drivers.

[11]Includes 300 rounds 4.2-in mort ammo and 25 rounds SS-10.

[12]Includes 5 trk with assault weapon SS-10.

[13]11 VRC-10; 3 VRC-18; and 4 VRQ-3.

[14]2 medium-range and 5 short-range sets.

[15]5 cooks; 8 tank crewmen; 2 AC drivers; 19 ¼-ton trk drivers; 3 2½-ton trk drivers; 1 tracked vehicle mechanic; and 2 wheeled vehicle mechanics.

[16]Includes 2½-ton wrecker.

[17]Includes 300 rounds 105-mm how ammo.

[18]1 VRC-9; 1 VRC-17.

[19]Howitzers are partially disassembled for movement.

[20]4 cooks; 2 ¼-ton trk drivers; 2 5-ton trk drivers.

[21]Includes water tank trailer.

[22]Consists of liaison officer and section; 5 FO sections; air control team with FAC; survey team; and 2 indiv from op and fire direction section.

[23]1 VRC-9; 1 VRC-35; 5 VRC-9; and 1 VRQ-2.

[24]Requirements when units are crossloaded.

Table VIII. Light Transport Airplane Requirements

	ASSAULT ECHELON (AIRPLANE)									REAR ECHELON (SURFACE)												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
			Major items of equipment								*Major items of equipment*											
Unit	*Pers*	*Additional cargo*	*Trk ¼-ton*	*Tlr ¼-ton*	*106-mm rifle*	*4.2-in mort*	*Radio*	*Radar*	*Aircraft requirements AC-1*[1]	*Pers*	*Trk ¼-ton*	*Tlr ¼-ton*	*Trk ¾-ton*	*Tlr ¾-ton*	*Trk 2½-ton*	*Tlr 1½-ton*	*Trk 5-ton*	*Tlr 2-ton*	*Tlr 2½-ton*	*Loader scoop*	*Carrier pers*	*Tank light*
HQ & HQ co	152	13,000[2]	34[3]	19			16[4]		27[5]	86[6]	3	3	11	11	18[7]	18[8]	7	2	3	1		
5 rifle co (each)	175	1,200[9]	5	3	2		1[10]		8	9[11]			4	4								
Combat support co	158	12,000[12]	26[13]	15		6	18[14]	7[15]	21	40[16]			19	19	3[17]	2					2	2
ACT from HQ & HQ btry, how bn[18]	2		1				1		0[5]													
Total TF	1,187	31,000	86	49	2	6	40	7	88 (80)[19]	171	3	3	50	50	21	20	7	2	3	1	2	2

[1]Requirements are based on payload of 7,500 lb. Radius is 50 NM. Requirements for rifle company and crossloaded total are computed by space method described in FM 57-35. Requirements for HQ and HQ co and cmbt spt co are computed by type load.

[2]Includes 500 AT mines and 2,000 lb of explosives.

[3]Includes 14 frontline ambulances.

[4]5 VRQ-3; 5 VRQ-18; 1 VRC-10; 1 VRC-24; 1 GRR-5; 1 GRC-19; and 2 GRC-46.

[5]ACT aircraft requirement are included in that of HQ and HQ co.

[6]2 liaison officers; 6 cooks; 12 indiv pers sec; 48 indiv sup and maint plat (including truck drivers); 2 ¼-ton trk drivers; 10 ¼-ton trk drivers; 5 2½-ton trk drivers; and 1 tractor operator.

[7]Includes 1 2½-ton shop van; 1 2½-ton wrecker; and 3 2½-ton dump trucks.

[8]Includes 7 water tank trailers.

[9]Includes 20 rounds 106-mm rifle ammo.

[10]VRQ-3.

[11]5 cooks; 4 ¾-ton trk drivers.

[12]Includes 300 rounds 4.2-in mort ammo and 25 rounds SS-10.

[13]Includes 5 trks with assault weapon SS-10.

[14]11 VRC-10; 3 VRC-18; and 4 VRQ-3.

[15]2 medium-range and 5 short-range sets.

[16]5 cooks; 8 tank crewmen; 2 AC drivers; 19 ¾-ton trk drivers; 3 2½-ton trk drivers; 1 tracked vehicle mechanic; and 2 wheeled vehicle mechanics.

[17]Includes 2½-ton wrecker.

[18]Air control team includes FAC.

[19]Requirement when units are crossloaded.

INDEX

	Paragraph	Page
Administration company (fig. 73)	App II	278
Administrative support:		
Battlefield recovery and evacuation	111	86
Civil affairs	122–124	93
Clothing exchange service	112	87
Control agencies	103	69
Control measures	106	76
Discipline, law, and order	120	91
Division logistics control center (DLCC)	104	69
Division rear area	100	68
Division trains	100	68
Division trains area	100	68
Division trains commander	105	72
Employment	102	68
Graves registration	119	91
Interior management	117	90
In the defense	199–226	158
In the offense	144–159	108
Maintenance	109	83
Main supply route	101	68
Maintenance of strength and personal services	115–118	88
Means	99	67
Medical service	110	85
Personnel support	115–121	88
Prisoners of war	121	92
Rear area security and area damage control	125, 126	93
Salvage	111	86
Supply	107	77
Transportation	108	81
Troop movements	314–357	255
Advance to contact	161–170	119
Airborne operations	269–273	216
Aircraft maintenance Detachment (fig. 86)	App II	278
Air defense	68	41
Airmobile operations	274–277	219
Amphibious operations	267, 268	215
Area defense	203–209	162
Armor battalion (figs. 43–45)	42, App II	28, 278
Army aviation:		
Division aviation company (fig. 70)	86, App II	58, 278
General	85	58
Nondivisional aviation support	87	60
Army Security Agency	73	44
Battle group (figs. 39–42)	36, App II	27, 278
Battle under special conditions	262–313	213

	Paragraph	Page
Bomb line	67	39
Boundaries	214	172
Brigade:		
Commander	12	10
Command post	21–24	15
Employment	20	14
Headquarters	18	14
Staff	15–20	11
Cavalry squadron (figs. 46–48)	48, App II	29, 278
Channels of command	13	11
Chemical support	92	64
Civil affairs	122–124	92
Command posts:		
Alternate	27	20
Brigade	24	18
Division main	22	16
Division tactical	23	18
Division trains	25	19
Construction	113	87
Counterattack	224	176
Counterintelligence	76	46
Defense:		
Against airmobile attack	219	175
Against infiltration	221	175
Against armor	218	174
Air defense	220	175
Area defense	203–209	162
Conduct of the defense	225, 226	180
Control measures	214	172
Echelons of the defense	207–210	165
Forms of defense	205	163
Fundamentals of defense	201	158
Integration of defensive measures	202	161
Mobile defense	203	162
Schematic deployments	206	165
Planning	211–222	168
The reserve	210	167
Offensive maneuver in the defense	223, 224	176
Demonstration	282	229
Discipline, law and order	120	91
Division artillery (figs. 56–63)	54, App II	31, 278
Division:		
Commander	11	10
Command post	21	15
General (figs. 37, 38)	App II	278
Radio nets	32	23
Rear echelon	26	19
Roles and missions	5, 6	6
Staff	15, 16	11
Division trains:		
Area	100	68
Commander	105	72

	Paragraph	Page
Division trains—Continued		
Command post	25	19
General	99	67
Division logistics control center (DLCC)	104	69
Division chemical, Biological, and Radiological Center (CBRC).	17	12
Division fire support coordination center	17–63	12
Engineer:		
Construction	79	47
Division engineer battalion (figs. 49–51)	79, App II	47, 278
Maintenance	109	83
Envelopment	175–180	132
Exploitation	185–191	143
Feints	281	228
Fire support:		
Air defense	68	41
Artillery fire planning	64–66	36
Control measures	67	39
Coordination	62–67	35
Fire support coordination center	17, 63	12, 35
In the offense	136–157	102
In the defense	216	173
Plan	64–66	36
Requests	65	37
Tactical air support	17	12
Graves registration	119	91
Howitzer battalion (fig. 58)	App II	278
Infiltration	18–184	138
Intelligence:		
Agencies	73	44
Counterintelligence	76	46
Flow of	71	43
General	70	43
Reconnaissance	72	43
Support	70	43
Surveillance	75	46
Tactical cover and deception	77	47
Target acquisition	74	45
Liaison	28	21
Link-up operations	278, 279	222
Logistical support	107–114	77
Military intelligence detachment	73	44
Mobility data-general	10	8
Medical:		
Division medical battalion (figs. 74–77)	App II	278
Evacuation and hospitalization	110	85
Maintenance	109	83
Night combat	192–194	149
Nuclear safety line	67	39

	Paragraph	Page
No-fire line	67	39
Operational environment	4	5
Offense:		
Administrative support	144–159	108
Basic considerations	132–148	98
Choice of maneuver	131	98
Characteristics	128	96
Concept of operation	153	113
Conduct	146	109
Continuation	147	110
Control and coordination	138–158	103
Discontinuation	148	111
Distribution of forces	140	104
Employment of forces	141	106
Fire support	136	102
Forms of maneuver	130	98
Frontages and depths	139	104
Fundamentals	129	97
Orders	138	103
Planning	149	111
Pursuit	189	145
Security	142	107
Tactical cover and deception	143	107
Terrain and weather	133	99
Ordnance battalion (figs. 78–80)	App II	278
Ordnance maintenance	109	81
Organization, infantry division (fig. 37)	7, App II	7, 278
Organization charts, all units	App II	278
Organization for combat	31–156	23
Penetration	171–174	127
Phase line	158	115
Psychological warfare	96	66
Quartermaster company (fig. 81)	112, App II	87, 278
Raids	280	227
Rocket/howitzer battalion (figs. 66–69)	App II	278
Rear area security and area damage control	125, 126	93
Reconnaissance in force	195–198	155
Recovery and evacuation	111	86
Relief operations:		
Passage of lines	254, 261	207, 212
Purpose and type	248	202
Relief in place	250, 260	202, 211
Replacements	115	88
Retrograde operations	227–247	182
Ruses	283	230
Signal:		
Area communications system	83	52
Division signal battalion (figs. 52–55)	82, App II	50, 278
Effectiveness	33	24
General	32	23
Maintenance	109	83

	Paragraph	Page
Staff:		
Brigade staff	20	14
Division staff	15–17	11
Sucession of command	14	11
Task forces	35	25
Transportation battalion (figs. 82–85)	90, 91, App II	6, 278
Troop movements	314–357	255
Weather service	73	44
Weather and terrain	133	99

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For explanation of abbreviations used, see AR 320–50.

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